L Number	Hits	Search Text	DB	Time stamp
1	1	("5767322").PN.	USPAT; US-PGPUB	2002/09/05 18:20
2	34	cumene adj hydroperoxide adj water	USPAT; US-PGPUB	2002/09/05 18:24
3	28	cumene adj hydroperoxide adj mixture	USPAT; US-PGPUB	2002/09/05 18:24
4	8	cumene adj hydroperoxide adj composition	USPAT; US-PGPUB	2002/09/05 18:24
5	35	(cumene adj hydroperoxide adj mixture) or (cumene adj hydroperoxide adj composition)	USPAT; US-PGPUB	2002/09/05 18:25
6	32	((cumene adj hydroperoxide adj mixture) or (cumene adj hydroperoxide adj composition)) and (water or H2O)	USPAT; US-PGPUB	2002/09/05 18:25

```
Welcome to STN International!  Enter x:x

LOGINID:ssspta1204jxv

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2  Apr 08   "Ask CAS" for self-help around the clock
 NEWS  3  Apr 09   BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS  4  Apr 09   ZDB will be removed from STN
 NEWS  5  Apr 19   US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
 NEWS  6  Apr 22   Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
 NEWS  7  Apr 22   BIOSIS Gene Names now available in TOXCENTER
 NEWS  8  Apr 22   Federal Research in Progress (FEDRIP) now available
 NEWS  9  Jun 03   New e-mail delivery for search results now available
 NEWS 10  Jun 10   MEDLINE Reload
 NEWS 11  Jun 10   PCTFULL has been reloaded
 NEWS 12  Jul 02   FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22   USAN to be reloaded July 28, 2002;
                   saved answer sets no longer valid
 NEWS 14  Jul 29   Enhanced polymer searching in REGISTRY
 NEWS 15  Jul 30   NETFIRST to be removed from STN
 NEWS 16  Aug 08   CANCERLIT reload
 NEWS 17  Aug 08   PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08   NTIS has been reloaded and enhanced
 NEWS 19  Aug 19   Aquatic Toxicity Information Retrieval (AQUIRE)
                   now available on STN
 NEWS 20  Aug 19   IFIPAT, IFICDB, and IFIUDB have been reloaded
 NEWS 21  Aug 19   The MEDLINE file segment of TOXCENTER has been reloaded
 NEWS 22  Aug 26   Sequence searching in REGISTRY enhanced
 NEWS 23  Sep 03   JAPIO has been reloaded and enhanced

 NEWS EXPRESS  February 1 CURRENT WINDOWS VERSION IS V6.0d,
               CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
               AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
 NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
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FILE 'HOME' ENTERED AT 17:20:54 ON 05 SEP 2002

=> file caplus
```

```
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'CAPLUS' ENTERED AT 17:21:16 ON 05 SEP 2002
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```
FILE COVERS 1907 - 5 Sep 2002  VOL 137 ISS 10
FILE LAST UPDATED: 4 Sep 2002  (20020904/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> file reg
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.40       0.61

FILE 'REGISTRY' ENTERED AT 17:21:28 ON 05 SEP 2002
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STRUCTURE FILE UPDATES:    4 SEP 2002  HIGHEST RN 446821-48-3
DICTIONARY FILE UPDATES:   4 SEP 2002  HIGHEST RN 446821-48-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

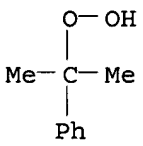
Calculated physical property data is now available.  See HELP PROPERTIES
for more information.  See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s cumene hydroperoxide/cn
L1            1 CUMENE HYDROPEROXIDE/CN

=> d

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   80-15-9  REGISTRY
CN   Hydroperoxide, 1-methyl-1-phenylethyl (9CI)  (CA INDEX NAME)
```

OTHER CA INDEX NAMES:
CN Hydroperoxide, .alpha.,.alpha.-dimethylbenzyl (8CI)
OTHER NAMES:
CN .alpha.,.alpha.-Dimethylbenzyl hydroperoxide
CN .alpha.-Cumene hydroperoxide
CN .alpha.-Cumyl hydroperoxide
CN 1-Methyl-1-phenylethyl hydroperoxide
CN 2-Hydroperoxy-2-phenylpropane
CN 2-Phenyl-2-propyl hydroperoxide
CN 7-Cumyl hydroperoxide
CN CHP 158
CN Cumen hydroperoxide
CN **Cumene hydroperoxide**
CN Cumenyl hydroperoxide
CN Cumyl hydroperoxide
CN Hyperiz
CN Isopropylbenzene hydroperoxide
CN Kayacumene H
CN Percumyl H
CN Percumyl H 80
CN R 239A
CN Trigonox K 80
CN Trigonox R 239A
CN Trigonox R 239R
FS 3D CONCORD
DR 79568-78-8
MF C9 H12 O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL, VTB
      (*File contains numerically searchable property data)
    Other Sources: DSL**, EINECS**, TSCA**
      (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

          4686 REFERENCES IN FILE CA (1967 TO DATE)
            39 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          4690 REFERENCES IN FILE CAPLUS (1967 TO DATE)
            28 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s cumene hydroperoxide
           657 CUMENE
          5406 HYDROPEROXIDE
             4 HYDROPEROXIDES
          5406 HYDROPEROXIDE
                 (HYDROPEROXIDE OR HYDROPEROXIDES)
L2   25 CUMENE HYDROPEROXIDE
                 (CUMENE(W)HYDROPEROXIDE)

```
=> s l2 and water
          2160 WATER
            78 WATERS
          2238 WATER
                 (WATER OR WATERS)
L3           0 L2 AND WATER

=> s l2 and h20
           244 H20
L4           0 L2 AND H20

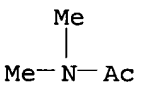
=> d scan ;2
L4 HAS NO ANSWERS


2 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

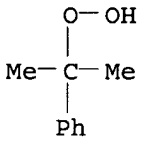
=> d scan l2

L2   25 ANSWERS   REGISTRY  COPYRIGHT 2002 ACS
IN   Acetamide, N,N-dimethyl-, compd. with 1-methyl-1-phenylethyl hydroperoxide
     (1:1) (9CI)
MF   C9 H12 O2 . C4 H9 N O

     CM   1
```

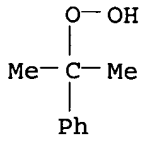


```
     CM   2
```

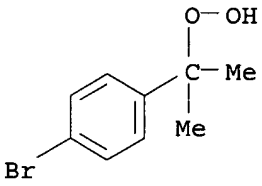


```
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

L2   25 ANSWERS   REGISTRY  COPYRIGHT 2002 ACS
IN   Hydroperoxide, 1-methyl-1-phenylethyl, sodium salt (9CI)
MF   C9 H12 O2 . Na
```

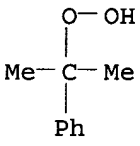


L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-(4-bromophenyl)-1-methylethyl (9CI)
MF C9 H11 Br O2
CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

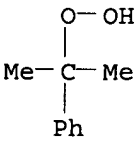
L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-methyl-1-phenylethyl (9CI)
MF C9 H12 O2
CI COM



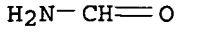
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Formamide, compd. with 1-methyl-1-phenylethyl hydroperoxide (1:1) (9CI)
MF C9 H12 O2 . C H3 N O

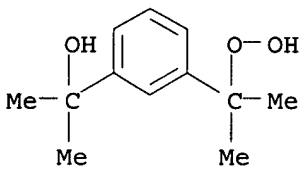
CM 1



CM 2

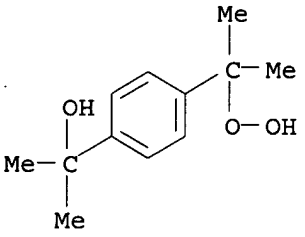


L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Benzenemethanol, 3-(1-hydroperoxy-1-methylethyl)-.alpha.,.alpha.-dimethyl- (9CI)
MF C12 H18 O3



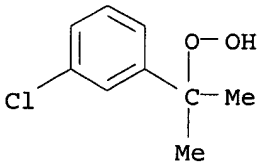
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Benzenemethanol, 4-(1-hydroperoxy-1-methylethyl)-.alpha.,.alpha.-dimethyl- (9CI)
MF C12 H18 O3



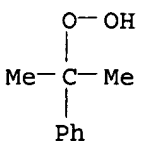
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-(3-chlorophenyl)-1-methylethyl (9CI)
MF C9 H11 Cl O2
CI COM

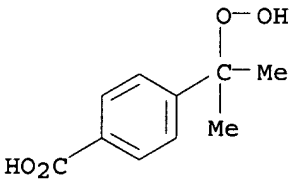


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-methyl-1-phenylethyl, potassium salt (9CI)
MF C9 H12 O2 . K

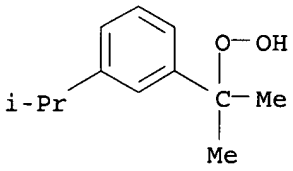


L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Benzoic acid, 4-(1-hydroperoxy-1-methylethyl)- (9CI)
MF C10 H12 O4
CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-methyl-1-[3-(1-methylethyl)phenyl]ethyl (9CI)
MF C12 H18 O2

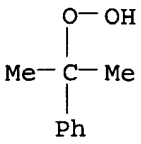


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

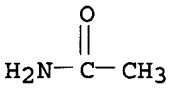
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Acetamide, compd. with 1-methyl-1-phenylethyl hydroperoxide (1:1) (9CI)
MF C9 H12 O2 . C2 H5 N O

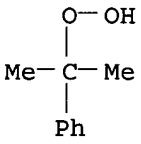
    CM 1



CM 2

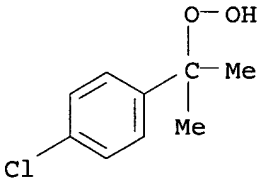


L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-methyl-1-phenylethyl, lithium salt (9CI)
MF C9 H12 O2 . Li



● Li

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-(4-chlorophenyl)-1-methylethyl (9CI)
MF C9 H11 Cl O2
CI COM

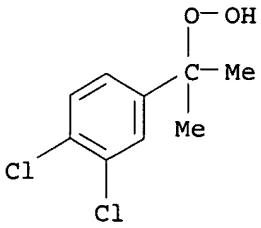


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN **Pitch, phenol manuf. cumene hydroperoxide oxidn.**
MF Unspecified
CI MAN, CTS

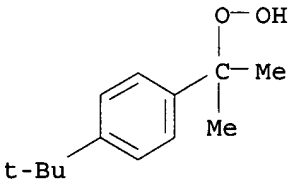
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-(3,4-dichlorophenyl)-1-methylethyl (9CI)
MF C9 H10 Cl2 O2



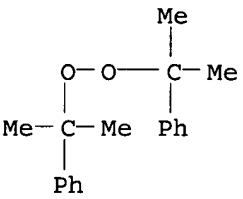
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-[4-(1,1-dimethylethyl)phenyl]-1-methylethyl (9CI)
MF C13 H20 O2
CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

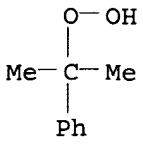
L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Peroxide, bis(1-methyl-1-phenylethyl) (9CI)
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT
MF C18 H22 O2
CI COM



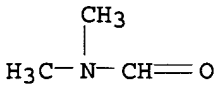
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Formamide, N,N-dimethyl-, compd. with 1-methyl-1-phenylethyl hydroperoxide (1:1) (9CI)
MF C9 H12 O2 . C3 H7 N O

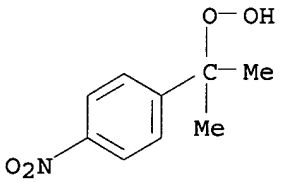
CM 1



CM 2

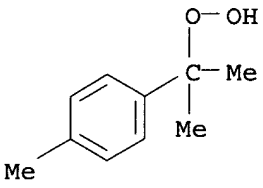


L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-methyl-1-(4-nitrophenyl)ethyl (9CI)
MF C9 H11 N O4
CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

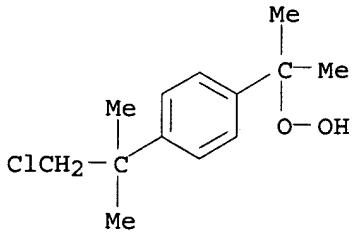
L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-methyl-1-(4-methylphenyl)ethyl (9CI)
MF C10 H14 O2
CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

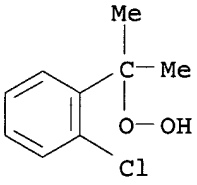
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-[4-(2-chloro-1,1-dimethylethyl)phenyl]-1-methylethyl (9CI)
MF C13 H19 Cl O2
CI COM



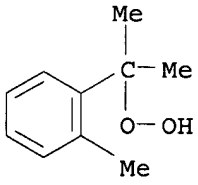
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-(2-chlorophenyl)-1-methylethyl (9CI)
MF C9 H11 Cl O2



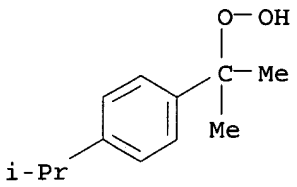
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-methyl-1-(2-methylphenyl)ethyl (9CI)
MF C10 H14 O2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 25 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Hydroperoxide, 1-methyl-1-[4-(1-methylethyl)phenyl]ethyl (9CI)
MF C12 H18 O2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	22.34	22.95

FILE 'CAPLUS' ENTERED AT 17:22:28 ON 05 SEP 2002
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FILE COVERS 1907 - 5 Sep 2002 VOL 137 ISS 10
FILE LAST UPDATED: 4 Sep 2002 (20020904/ED)

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=> d his

(FILE 'HOME' ENTERED AT 17:20:54 ON 05 SEP 2002)

FILE 'CAPLUS' ENTERED AT 17:21:16 ON 05 SEP 2002

FILE 'REGISTRY' ENTERED AT 17:21:28 ON 05 SEP 2002
L1 1 S CUMENE HYDROPEROXIDE/CN
L2 25 S CUMENE HYDROPEROXIDE
L3 0 S L2 AND WATER
L4 0 S L2 AND H20

FILE 'CAPLUS' ENTERED AT 17:22:28 ON 05 SEP 2002

=> s l1 and weight percent water
4694 L1

```
          87965 WEIGHT
           7555 WEIGHTS
          93397 WEIGHT
                  (WEIGHT OR WEIGHTS)
        1272657 WT
          94563 WTS
        1321531 WT
                  (WT OR WTS)
        1348119 WEIGHT
                  (WEIGHT OR WT)
          67923 PERCENT
           1267 PERCENTS
          68985 PERCENT
                  (PERCENT OR PERCENTS)
        1940411 WATER
         212506 WATERS
        1991062 WATER
                  (WATER OR WATERS)
             32 WEIGHT PERCENT WATER
                  (WEIGHT(W)PERCENT(W)WATER)
L5            0 L1 AND WEIGHT PERCENT WATER

=> s l1 (l) (water or h2o)
           4694 L1
        1940411 WATER
         212506 WATERS
        1991062 WATER
                  (WATER OR WATERS)
         918284 H2O
L6          118 L1 (L) (WATER OR H2O)

=> s cumene?/ti
L7         2029 CUMENE?/TI

=> s l6 and l7
L8           10 L6 AND L7

=> d ti 1-10

L8   ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2002 ACS
TI   Process for separating phenol from a mixture comprising at least
     hydroxyacetone, cumene, water and phenol

L8   ANSWER 2 OF 10  CAPLUS  COPYRIGHT 2002 ACS
TI   Preparation of environmentally safe, water-diluted cumene
     hydroperoxide solutions

L8   ANSWER 3 OF 10  CAPLUS  COPYRIGHT 2002 ACS
TI   Procedure for the recovery of cumene hydroperoxide from
     hydroperoxide-containing, phenol-manufacture process waste water by
     extraction with cumene

L8   ANSWER 4 OF 10  CAPLUS  COPYRIGHT 2002 ACS
TI   Water-alkaline emulsion cumene oxidation process

L8   ANSWER 5 OF 10  CAPLUS  COPYRIGHT 2002 ACS
TI   Reliability and hazards analysis of a cumene hydroperoxide plant

L8   ANSWER 6 OF 10  CAPLUS  COPYRIGHT 2002 ACS
TI   Oxidation of cumene in the presence of water additives

L8   ANSWER 7 OF 10  CAPLUS  COPYRIGHT 2002 ACS
TI   Chromatographic determination of water and phenol in products from the
     manufacture of phenol and acetone by the cumene hydroperoxide
```

process

L8 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2002 ACS
TI **Cumene** hydroperoxide

L8 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2002 ACS
TI Study of intermolecular interactions in the **cumene** hydroperoxide-water system by the proton magnetic resonance method

L8 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2002 ACS
TI Study of the decomposition of **cumene** hydroperoxide in the presence of different inhibitors during production of butadiene-styrene rubbers

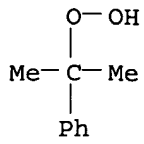
=> d ibib abs hitstr 1-10

L8 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:429321 CAPLUS
DOCUMENT NUMBER: 136:403494
TITLE: Process for separating phenol from a mixture comprising at least hydroxyacetone, **cumene**, water and phenol
INVENTOR(S): Schwarz, Christoph; Weber, Mark; Tanger, Uwe; Korte, Hermann-Josef; Ullrich, Jochen
PATENT ASSIGNEE(S): Phenolchemie G.m.b.H. & Co. K.-G., Germany
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002066661	A1	20020606	US 2001-970856	20011005
WO 2002046133	A1	20020613	WO 2001-EP14029	20011130

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DE 2000-10060505 A 20001206
AB Phenol is sepd. from a mixt. contg. hydroxyacetone, cumene, H2O and phenol, by fractionating the mixt. in a process with a fractional distn. step and a phase sepn. step to provide a single phenol fraction contg. <300 ppm of hydroxyacetone. In the work-up by distn. of cleavage product mixts., the hydroxyacetone can be removed from the cleavage product mixt. together with a phenol fraction from which the hydroxyacetone has to be removed. A process can be used for purifying cleavage product mixts. obtained in the cleavage of alkylaryl hydroperoxides such as cumene hydroperoxide. The process allows sepn. of phenol and acetone from mixts. obtained in the cleavage of cumene hydroperoxide.
IT **80-15-9**, Cumene hydroperoxide
RL: CAT (Catalyst use); USES (Uses)
(process for sepg. phenol from a mixt. comprising at least hydroxyacetone, cumene, **water** and phenol)
RN 80-15-9 CAPLUS
CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



L8 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:220548 CAPLUS
DOCUMENT NUMBER: 136:264830
TITLE: Preparation of environmentally safe, water-diluted **cumene** hydroperoxide solutions
INVENTOR(S): Henry, Keith E.; Aiken, John E.
PATENT ASSIGNEE(S): Aristech Chemical Corporation, USA
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

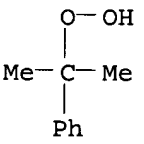
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002022570	A2	20020321	WO 2001-US28123	20010904
WO 2002022570	A3	20020704		
W: AU, CA, JP, KR, MX, NO, RU				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
AU 2001088913	A5	20020326	AU 2001-88913	20010904

PRIORITY APPLN. INFO.: US 2000-660099 A 20000912
WO 2001-US28123 W 20010904

AB The use of water, rather than cumene, as a more environmentally acceptable diluent for purified cumene hydroperoxide (CHP) solns. is described. From 1-6% water can be used to dil. purified CHP solns., thus reducing or eliminating the use of the hazardous compd. cumene as a diluent. This method and the CHP-water solns. significantly reduce or eliminate the hazardous emissions problems encountered with the use of cumene as a diluent and make CHP solns. more environmentally acceptable to produce, transport, and use. Water as a diluent also depresses the f.p. of the resultant soln., thus enabling year-round use of higher-concn. CHP solns. Water-dild. CHP solns. also reduce cumene-related impurities in finished products made from them.

IT **80-15-9**, Cumene hydroperoxide
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(prepn. of safe **water**-dild. cumene hydroperoxide solns.)

RN 80-15-9 CAPLUS
CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



L8 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:188382 CAPLUS
DOCUMENT NUMBER: 132:209457

TITLE: Procedure for the recovery of **cumene** hydroperoxide from hydroperoxide-containing, phenol-manufacture process waste water by extraction with **cumene**
INVENTOR(S): Hofmann, Guenter; Pester, Rolf; Bartkowiak, Horst
PATENT ASSIGNEE(S): Domo Caproleuna G.m.b.H., Germany
SOURCE: Ger., 6 pp.
CODEN: GWXXAW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19846508	C1	20000323	DE 1998-19846508	19981009
EP 997456	A1	20000503	EP 1999-119594	19991002

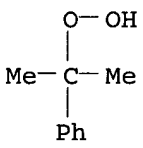
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: DE 1998-19846508 19981009

AB Cumene hydroperoxide is recovered from hydroperoxide-contg., phenol-manuf. process waste water by extn. of the water with cumene (cumol) which is formed during phenol manuf. The waste water resulting after the extn. contains only traces of cumene hydroperoxide and exhibits almost no removal of the residual Me hydroperoxide.

IT **80-15-9P**, Cumene hydroperoxide
RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PREP (Preparation); PROC (Process)
(procedure for the recovery of cumene hydroperoxide from hydroperoxide-contg. phenol-manuf. process waste **water** by extn. with cumol)

RN 80-15-9 CAPLUS
CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)

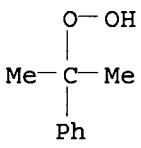


REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:116085 CAPLUS
DOCUMENT NUMBER: 128:129491
TITLE: Water-alkaline emulsion **cumene** oxidation process
INVENTOR(S): Zakoshansky, Vladimir Michailo; Griaznov, Andrei K.; Vasilieva, Irina Ivanovna; Fulmer, John William; Kight, William Dale
PATENT ASSIGNEE(S): General Electric Co., USA
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 816335	A1	19980107	EP 1997-304341	19970620

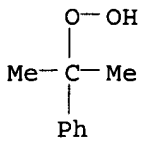
EP 816335 B1 20011031
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
US 5767322 A 19980616 US 1996-670304 19960627
ES 2163102 T3 20020116 ES 1997-304341 19970620
CN 1173491 A 19980218 CN 1997-114047 19970624
CN 1088059 B 20020724
JP 10087609 A2 19980407 JP 1997-167816 19970625
US 5908962 A 19990601 US 1998-20395 19980209
PRIORITY APPLN. INFO.: US 1996-670304 A 19960627
AB Greater efficiency in the title process using a cascade of reactors is obtained by splitting the reactor cascade into 2 stages with the 1st stage utilizing NH4NaCO3 as the active carbonate in the stage contg. .ltoreq.18% cumene hydroperoxide (I) and using Na2CO3 as the active carbonate in the stage contg. .gtoreq.18% I. By directly injecting ammonia into a recycle stream org. acids are efficiently neutralized. A counter current water wash of the 2nd stage also increases process efficiency by scrubbing out unwanted impurities. Control of pH in the process improves efficiency and reduces impurity levels.
IT **80-15-9P**, Cumene hydroperoxide
RL: IMF (Industrial manufacture); PREP (Preparation)
(**water**-alk. emulsion cumene oxidn. process with good efficiency)
RN 80-15-9 CAPLUS
CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



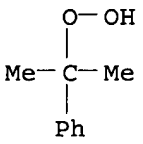
L8 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:429162 CAPLUS
DOCUMENT NUMBER: 105:29162
TITLE: Reliability and hazards analysis of a **cumene** hydroperoxide plant
AUTHOR(S): Arendt, J. S.; Casada, M. L.; Rooney, J. J.
CORPORATE SOURCE: JBF Assoc. Inc., Knoxville, TN, 37932, USA
SOURCE: Plant/Oper. Prog. (1986), 5(2), 97-102
CODEN: POPPDE; ISSN: 0278-4513
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An anal. of reliability and risk of a cumene hydroperoxide [**80-15-9**] plant led to conclusions that call for the updating of the existing emergency procedures dealing with the oxidizers, inspections and testing of important safety equipment on a regular basis, shortening the closure time delay of the main process air valve in case of a power outage, and a modification of the existing emergency procedures for the diesel cooling **water** system.

L8 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:67930 CAPLUS
DOCUMENT NUMBER: 100:67930
TITLE: Oxidation of **cumene** in the presence of water additives
AUTHOR(S): Golysheva, G. P.; Ionova, M. V.; Il'ina, T. A.; Vasil'ev, V. F.
CORPORATE SOURCE: Vses. Nauchno-Issled. Inst. Org. Sint., Novokuibyshevsk, USSR
SOURCE: Neftepererab. Neftekhim. (Moscow) (1983), (12), 31

CODEN: NNNSAF; ISSN: 0028-1190
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Addn. of H2O to a cumene oxidn. system increased the rate of cumene hydroperoxide formation but lowered the selectivity.
IT **80-15-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, effect of **water** on)
RN 80-15-9 CAPLUS
CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



L8 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1983:624444 CAPLUS
DOCUMENT NUMBER: 99:224444
TITLE: Chromatographic determination of water and phenol in products from the manufacture of phenol and acetone by the **cumene** hydroperoxide process
AUTHOR(S): Bruk, A. Yu.; Gaishun, K. A.; Markova, V. A.
CORPORATE SOURCE: Grozn. KhZ, Grozny, USSR
SOURCE: Neftepererab. Neftekhim. (Moscow) (1983), (10), 23-4
CODEN: NNNSAF; ISSN: 0028-1190
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB H2O and PhOH were detd. by gas chromatog. with thermal-cond. and flame-ionization detectors, resp. Various products were analyzed, such as Me2CO, phenol-formaldehyde resin, Syntan 2 tanning agent, and the reaction mass from the decompn. of cumene hydroperoxide. The sepn. was carried out at 130.degree. on a 50 .times. 0.3-cm column packed with Polysorb 1 coated with 5 wt.% Tween 80.
IT **80-15-9D**, decompn. products
RL: ANST (Analytical study)
(phenol and **water** detn. in, gas chromatog.)
RN 80-15-9 CAPLUS
CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



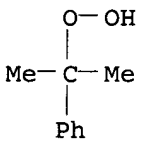
L8 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1982:144912 CAPLUS
DOCUMENT NUMBER: 96:144912
TITLE: **Cumene** hydroperoxide
INVENTOR(S): Franke, Christiane; Fuhrmann, Guenther; Haase, Bernd; Hager, Werner; Hofmann, Rolf; Naumann, Hans Joachim; Raue, Bernd
PATENT ASSIGNEE(S): VEB Leuna-Werke "Walter Ulbricht", Ger. Dem. Rep.
SOURCE: Ger. (East), 10 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent

LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 151000	T	19810930	DD 1979-212412	19790423

AB cumene [98-82-8] Is oxidized to prep. cumene hydroperoxide (I) [**80-15-9**], and the unreacted cumene is sepd. by distn., washed with **water** to remove org. acids (esp. HCO2H), and recycled to the oxidn. step. Addnl. I is extd. from the **water** with cumene. The method increases the yield of I, decreases the formation of by-products, and minimizes the deposition of insol. materials on surfaces in the app. The I is used to prep. phenol and acetone. Thus, 54,100 parts oxidn. products contg. I 20.6, PhCMe2OH 1.4, and PhAc 0.19% was distd. to sep. 11,000 parts I contg. <100 ppm org. acids, and the cumene (contg. 110 parts org. acid, calcd. as HCO2H) was washed with 1600 parts **water**, mixed with 870 parts cumene and 1.9 parts 15% aq. NaOH, and recycled to the oxidn. step. The **water** was extd. with 200 parts cumene to recover 8 parts I, giving waste **water** contg. <2000 ppm I. The oxidn. and distn. app. required cleaning after 1 yr, compared with 350 h when the recycled cumene was not washed with **water**.

L8 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1977:600365 CAPLUS
DOCUMENT NUMBER: 87:200365
TITLE: Study of intermolecular interactions in the **cumene** hydroperoxide-water system by the proton magnetic resonance method
AUTHOR(S): Markaryan, Sh. A.; Beileryan, N. M.; Grigoryan, S. K.
CORPORATE SOURCE: Erevan. Gos. Univ., Yerevan, USSR
SOURCE: Zh. Fiz. Khim. (1977), 51(9), 2385-7
CODEN: ZFKHA9
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB NMR data indicated that in the title system proton exchange occurs between PhCMe2OOH (I) and H2O. At 97:3 I-H2O the rate const. for this exchange is 85 s-1. Interactions between the .pi. system of I and H2O also occur.
IT **80-15-9**
RL: PRP (Properties)
(interaction of, with **water**)
RN 80-15-9 CAPLUS
CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



L8 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1977:30764 CAPLUS
DOCUMENT NUMBER: 86:30764
TITLE: Study of the decomposition of **cumene** hydroperoxide in the presence of different inhibitors during production of butadiene-styrene rubbers
AUTHOR(S): Titov, A. P.; Papkov, V. N.; Smol'yaninova, T. S.
CORPORATE SOURCE: USSR
SOURCE: Zh. Prikl. Khim. (Leningrad) (1976), 49(9), 2041-3
CODEN: ZPKHAB
DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The inhibition of emulsion polymn. initiated by cumene hydroperoxide (I) [**80-15-9**]-redox system by inhibitors [Na N,N-dimethyldithiocarbamate (II) [128-04-1], NaNO2, p-hydroxydiphenylamine (III) [122-37-2], hydroxylamine (IV) [7803-49-8] N,N-diethylhydroxylamine (V) [3710-84-7], or dibenzylhydroxylamine (VI) [621-07-8]] is due in part to the decompn. of I by these inhibitors and in part to the chain termination reactions in which these inhibitors participate. The foregoing was demonstrated by detg. the kinetics of I decompn. in media modelling the emulsions used in prepn. of SBR. These media contained I, redox system, PhMe (substituted for monomers), and **water**. The effectiveness of I decompn. decreased in the series: V > III > IV > VI > NaNO2 > II which did not correspond exactly to the effectiveness of arresting the formation of SBR in emulsion copolymns.

=> file merck

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	52.96	75.91
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-6.20	-6.20

FILE 'MRCK' ENTERED AT 17:26:43 ON 05 SEP 2002
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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L9 0 L1

=> d his

(FILE 'HOME' ENTERED AT 17:20:54 ON 05 SEP 2002)

FILE 'CAPLUS' ENTERED AT 17:21:16 ON 05 SEP 2002

FILE 'REGISTRY' ENTERED AT 17:21:28 ON 05 SEP 2002
L1 1 S CUMENE HYDROPEROXIDE/CN
L2 25 S CUMENE HYDROPEROXIDE
L3 0 S L2 AND WATER
L4 0 S L2 AND H20

FILE 'CAPLUS' ENTERED AT 17:22:28 ON 05 SEP 2002
L5 0 S L1 AND WEIGHT PERCENT WATER
L6 118 S L1 (L) (WATER OR H2O)
L7 2029 S CUMENE?/TI
L8 10 S L6 AND L7

FILE 'MRCK' ENTERED AT 17:26:43 ON 05 SEP 2002
L9 0 S L1

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=> file beilstein
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.30      76.21

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00      -6.20

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*** FILE CONTAINS 8,128,462 SUBSTANCES ***

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>>> PLEASE NOTE: Reaction and substance documents are stored in
    different file segments. Use separate queries to search for
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    information you have the option to chose the file segment.
    (Use "/XXX.SUB" to search for a bibliographic term in
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    documents use "/XXX.RX".)
    For additional information see HELP RXS. <<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE  <<<

*********************************************************************
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=> s l1
L10          1 L1

=> d aze

L10  ANSWER 1 OF 1 BEILSTEIN COPYRIGHT 2002 BEILSTEIN CDS MDL

Azeotrope (MCS):
 Value      |Ref.
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=> d fpre
'FPRE' IS NOT A VALID FORMAT FOR FILE 'BEILSTEIN'

The following are valid formats:

QRD --------- Query Related Data (IDE plus HIT)
IDE --------- Identification of Substance, plus Structure
  (BRN, MF, LSF, CN, SY, AUN, MW, SO, NTE, LN, RN, BPR, RSI, OS, STR)
ALL --------- All Display fields (Lengthy display!)
CHE --------- Chemical Data
PHY --------- Physical Data
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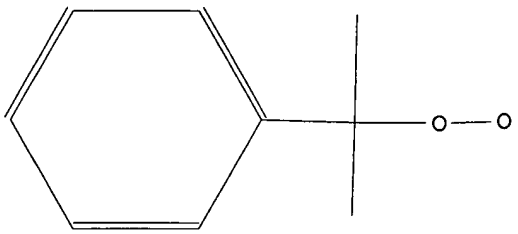
=> d ide

L10 ANSWER 1 OF 1 BEILSTEIN COPYRIGHT 2002 BEILSTEIN CDS MDL

Beilstein Records (BRN):	1908117
Beilstein Pref. RN (BPR):	80-15-9
CAS Reg. No. (RN):	**80-15-9**
Chemical Name (CN):	1-methyl-1-phenyl-ethyl hydroperoxide, 1-Methyl-1-phenyl-aethylhydroperoxid, .alpha.,.alpha.-dimethylbenzyl hydroperoxide, cumene hydroperoxide, .alpha.-cumyl hydroperoxide
Autonom Name (AUN):	1-methyl-1-phenyl-ethyl hydroperoxide
Molec. Formula (MF):	C9 H12 O2
Molecular Weight (MW):	152.19
Lawson Number (LN):	5240
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	1754219
Tautomer ID (TAUTID):	1833317
Beilstein Citation (BSO):	3-06-00-01814, 4-06-00-03221, 5-06, 6-06
Entry Date (DED):	1989/06/29
Update Date (DUPD):	2001/07/25



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
CN	Chemical Name	5
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	4

ED	Entry Date	1
UPD	Update Date	1
ASSM	Association (MCS)	25
BP	Boiling Point	33
CDER	Chemical Derivative	31
DE	Dissociation Exponent	4
DEN	Density (Liquid)	6
DM	Dipole Moment	3
DP	Decomposition Point	1
ECTOX	Ecotoxicology	8
ELCB	Electrochemical Behaviour	1
ESR	ESR Data	2
FINFO	Further Information	2
HVAP	Enthalpy of Vaporization	1
IR	Infrared Spectrum	9
LLSM	Liquid/Liquid System (MCS)	8
LUM	Luminescence	1
MP	Melting Point	2
MS	Mass Spectrum	1
NMR	Nuclear Magnetic Resonance	20
OTHE	Other Thermochemical Data	1
PHARM	Pharmacological Data	92
RAS	Raman Spectrum	3
RI	Refractive Index	20
RSTR	Related Structure	1
SLB	Solubility (MCS)	3
SOLM	Solution Behaviour (MCS)	1
TRAM	Transport Phenomena (MCS)	1
USC	Use of Compound	1
UVS	UV and Visible Spectrum	3
XREF	Crossfile Reference	10

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	301
RXREA	Substance is Reaction Reactant	276
RXPRO	Substance is Reaction Product	25

=> d frxpro

L10 ANSWER 1 OF 1 BEILSTEIN COPYRIGHT 2002 BEILSTEIN CDS MDL

Reaction:
RX

Reaction ID:	8753725
Reactant BRN:	2454403
Reactant:	Perbuttersaeure-cumolester
Product BRN:	1908117
Product:	1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	8753725.1
Reaction Classification:	Preparation
Reagent:	(n-Bu3Sn)2O
Solvent:	diethyl ether
Time:	30 hour(s)
Temperature:	25 Cel
Reference(s):	

1. Baj, Stefan; Chrobok, Anna, Syn.Lett.
, CODEN: SYNLES(5), <2001>, 623 - 624; BABS-6282951

Reaction:
RX

Reaction ID:	8612643
Reactant BRN:	1236613
Reactant:	isopropylbenzene
Product BRN:	1905012, 1908117, 1905601, 969405
Product:	2-phenyl-propan-2-ol, 1-methyl-1-phenyl-ethyl hydroperoxide, 2-phenyl-propionaldehyde, isopropenylbenzene
Stoichiometric Equation:	1236613 *4
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	8612643.1
Reaction Classification:	Chemical behaviour
Reagent:	Fe(TPFPP)Cl, O2
Solvent:	various solvent(s)
Temperature:	100 Cel
Subject Studied:	Product distribution
Reaction Type:	Oxidation
Prototype Reaction:	Further Variations:, reaction times

Reference(s):
1. Evans, Steven; Smith, John R. Lindsay, J.Chem.Soc.Perkin Trans.2, CODEN: JCPKBH(7), <2000>, 1541 - 1552; BABS-6248901

Reaction:
RX

Reaction ID:	7160212
Reactant:	cumene (1-methyl-1-phenyl-ethyl hydroperoxide containing)
Product BRN:	1908117
Product:	1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	10

Reaction Details:
RX

Reaction RID:	7160212.1
Reaction Classification:	Preparation (half reaction)
Reagent:	benzoic acid, oxygen
Note(s):	Handbook

Reference(s):
1. Patent: Soc. Usines Chim. Rhone-Poulenc US 2697121 1952
RX

Reaction RID:	7160212.2
Reaction Classification:	Preparation (half reaction)
Reagent:	copper phthalocyanin, oxygen
Note(s):	Handbook

Reference(s):
1. Hock; Kropf, J.Prakt.Chem., CODEN: JPCEAO, <4> 9, <1959>, 173, 176, 184
RX

Reaction RID:	7160212.3
Reaction Classification:	Preparation (half reaction)
Reagent:	NH3, oxygen
Note(s):	Handbook

Reference(s):
1. Patent: Hercules Powder Co. US 2632026 1950
RX

Reaction RID:	7160212.4
Reaction Classification:	Preparation (half reaction)
Reagent:	aqueous NaOH, oxygen

Note(s): Handbook
Reference(s):
1. Patent: Hercules Powder Co. US 2663740 1952
2. Patent: Distillers Co. DE 924449 1948, DRP/DRBP Org.Chem.

RX
Reaction RID: 7160212.5
Reaction Classification: Preparation (half reaction)
Reagent: Na2CO3, oxygen
Note(s): Handbook
Reference(s):
1. Patent: ICI US 2796439 1954

RX
Reaction RID: 7160212.6
Reaction Classification: Preparation (half reaction)
Reagent: aqueous formaldehyde, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Soc. Usines Chim. Rhone-Poulenc US 2680139 1953

RX
Reaction RID: 7160212.7
Reaction Classification: Preparation (half reaction)
Reagent: copper formate, oxygen
Note(s): Handbook
Reference(s):
1. Patent: ICI US 2820832 1954

RX
Reaction RID: 7160212.8
Reaction Classification: Preparation (half reaction)
Reagent: copper benzoate, oxygen
Note(s): Handbook
Reference(s):
1. Patent: ICI US 2820832 1954

RX
Reaction RID: 7160212.9
Reaction Classification: Preparation (half reaction)
Reagent: manganese naphthenate, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Hercules Powder Co. US 2664448 1948

RX
Reaction RID: 7160212.10
Reaction Classification: Preparation (half reaction)
Reagent: ethanediyldiimino-tetra-acetic acid, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Edogawa Kagaku Kogyo K.K. US 2861107 1956

Reaction:

RX
Reaction ID: 7160211
Reactant BRN: 2037554, 3587191, 1905012
Reactant: sulfuric acid, hydrogen peroxide, 2-phenyl-propan-2-ol
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:

RX
Reaction RID: 7160211.1
Reaction Classification: Chemical behaviour
Other Conditions: 18O-markierter 2-Phenyl-propan-2-ol
Note(s): Handbook
Reference(s):

1. Bassey et al., J.Chem.Soc., CODEN: JCSOA9, <1955>, 2471, 2473

Reaction:
RX

Reaction ID:	7160210
Product BRN:	1908117
Product:	1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	7160210.1
Reaction Classification:	Preparation (half reaction)

Reference(s):

1. Patent: Phenolchemie GmbH DE 1668575 1968, Chem.Abstr., 74(125153m), <1971>
2. Richardson; Hodge, J.Org.Chem., CODEN: JOCEAH, 35, <1970>, 4012,4013, 4015
3. Antonovskii et al., Kinet.Catal.(Engl.Transl.), CODEN: KICAA8, 6, <1965>, 736, 815
4. Patent: Texaco. Devel. Corp. DE 2035504 1970, Chem.Abstr., 76(72223s), <1972>
5. Min'kov; Keier, Kinet.Catal.(Engl.Transl.), CODEN: KICAA8, 8, <1967>, 133,134,135
6. Min'kov et al., Kinet.Catal.(Engl.Transl.), CODEN: KICAA8, 8, <1967>, 333
7. Kulicki; Stec, Rocz.Chem., CODEN: ROCHAC, 50, <1976>, 1075,1076
8. Solonko et al., Kinet.Katal., CODEN: KNKTA4, 9, <1968>, 631
9. Solomko et al., Kinet.Katal., CODEN: KNKTA4, 9, <1968>, 815
10. Ishii et al., Kogyo Kagaku Zasshi, CODEN: KGKZA7, 64, <1961>, 472, Chem.Abstr., 57(7149)
11. Tanaka; Imamura, Chem.Lett., CODEN: CMLTAG, <1974>, 1347
12. Tsyskovskii et al., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 48, <1975>, 2811,2812-2813, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 48, <1975>, 2731
13. Choe; Tsutsumi, Nippon Kagaku Zasshi, CODEN: NPKZAZ, 81, <1960>, 582,583, Chem.Abstr., 56(397), <1962>
14. Burghardt et al., Zesz.Nauk.Politech.Slask.Chem., CODEN: ZNSCAM, 60, <1972>, 3,4-7,9,10,12-17
15. Kulicki, Zesz.Nauk.Politech.Slask.Chem., CODEN: ZNSCAM, 36, <1967>, 1,13,19-24,59,61,62
16. Norikov; Salukvadze, Dokl.Phys.Chem.(Engl.Transl.), CODEN: DKPCAG, 203, <1972>, 254
17. Choe; Tsutsuni, Nippon Kagaku Zasshi, CODEN: NPKZAZ, 81, <1960>, 582,583-586, Chem.Abstr.(397), <1962>
18. Wagner, J.Prakt.Chem., CODEN: JPCEAO, 27, <1965>, 297
19. Maruyama et al., Nippon Kagaku Zasshi, CODEN: NPKZAZ, 85, <1964>, 145, Chem.Abstr., 61(13222), <1964>
20. Kasmin, J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 35, <1962>, 398, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 35, <1962>, 422, Chem.Abstr., 57(700), <1962>
21. Patent: Etienne; Le Berre FR 1239348, Chem.Abstr., 56(3415), <1962>
22. Wagner, Z.Chem., CODEN: ZECEAL, 5, <1965>, 73
23. Kropf, Justus Liebigs Ann. Chem., CODEN: JLACBF, 637, <1960>, 73,76,92
24. Kropf; Knabjohann, Justus Liebigs Ann. Chem., CODEN: JLACBF, 739, <1970>, 95,98,99
25. Kulicki; Stec, Rocz.Chem., CODEN: ROCHAC, 45, <1971>, 601,603
26. Rouchaud, Bull.Soc.Chim.Belg., CODEN: BSCBAG, 76, <1967>, 171,184
27. Rouchaud, Bull.Soc.Chim.Belg., CODEN: BSCBAG, 76, <1967>, 186
28. Gadelle; Clement, Bull.Soc.Chim.Fr., CODEN: BSCFAS, <1967>, 1175
29. Fukui; Ohkubo, Bull.Chem.Soc.Jpn., CODEN: BCSJA8, 42, <1969>, 312
30. Kropf et al., C.R.Seances Acad.Sci.Ser.D, CODEN: CHDDAT, <1968>, 5527

Reaction:

RX

Reaction ID:	7067053
Reactant BRN:	3587191, 2037554, 1855036
Reactant:	hydrogen peroxide, sodium hydrogencarbonate, sulfuric acid, (.alpha.-chloro-isopropyl)-benzene
Product BRN:	1908117, 969405
Product:	1-methyl-1-phenyl-ethyl hydroperoxide, isopropenylbenzene
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	7067053.1
Reaction Classification:	Chemical behaviour
Note(s):	Handbook

Reference(s):
1. Ross; Huettel, Chem.Ber., CODEN: CHBEAM, 89, <1956>, 2641, 2643

Reaction:
RX

Reaction ID:	6731166
Reactant BRN:	1236613
Reactant:	isopropylbenzene
Product BRN:	5508788, 1908117, 605842, 1905012
Product:	cumyl hydrotrioxide, 1-methyl-1-phenyl-ethyl hydroperoxide, 1-phenyl-ethanone, 2-phenyl-propan-2-ol, ring product
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	6731166.1
Reaction Classification:	Chemical behaviour
Reagent:	O3, O2
Solvent:	acetone-d6
Time:	4 hour(s)
Temperature:	-40 Cel
Other Conditions:	further periods of time
Subject Studied:	Product distribution

Reference(s):
1. Pryor, William A.; Ohto, Norio; Church, Daniel F., J.Amer.Chem.Soc., CODEN: JACSAT, 105(11), <1983>, 3614-3622; BABS-5737674

Reaction:
RX

Reaction ID:	6725969
Reactant BRN:	1236613
Reactant:	isopropylbenzene
Product BRN:	1908117, 1905012, 605842, 969616, 635680, 969405
Product:	1-methyl-1-phenyl-ethyl hydroperoxide, 2-phenyl-propan-2-ol, 1-phenyl-ethanone, phenol, propan-2-one, isopropenylbenzene, acetic acid
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	6725969.1
Reaction Classification:	Chemical behaviour
Reagent:	(t-BuO)3Al, t-BuOOH
Solvent:	benzene
Time:	3.5 day(s)

Temperature: 20 Cel
Subject Studied: Mechanism, Product distribution
Reference(s):
1. Stepovik, L. P.; Dodonov, V. A.; Zaburdaeva, E. A., Russ.J.Gen.Chem., CODEN: RJGCEK, 67(1), <1997>, 111-115, Zh.Obshch.Khim., CODEN: ZOKHA4, 67(1), <1997>, 116-120; BABS-6099494

Reaction:
RX
Reaction ID: 6674993
Reactant BRN: 1236613
Reactant: oxygen, metal phthalocyaninene, isopropylbenzene
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 6674993.1
Reaction Classification: Chemical behaviour
Temperature: 50 - 150 Cel
Subject Studied: Kinetics
Note(s): Handbook
Reference(s):
1. Hock; Kropf, J.Prakt.Chem., CODEN: JPCEAO, <4> 9, <1959>, 173, 175

Reaction:
RX
Reaction ID: 6674992
Reactant BRN: 1236613
Reactant: oxygen, lead (IV) oxide, isopropylbenzene
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 6674992.1
Reaction Classification: Chemical behaviour
Temperature: 80 Cel
Subject Studied: Kinetics
Note(s): Handbook
Reference(s):
1. Hock; Kropf, J.Prakt.Chem., CODEN: JPCEAO, <4> 6, <1958>, 120

Reaction:
RX
Reaction ID: 6674991
Reactant BRN: 1236613
Reactant: oxygen, copper, isopropylbenzene
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 6674991.1
Reaction Classification: Chemical behaviour
Temperature: 120 Cel
Subject Studied: Kinetics
Note(s): Handbook
Reference(s):
1. De Boer et al., Proc.K.Ned.Akad.Wet.Ser.B:Phys.Sci., CODEN: KNWBAA, <B>

61, <1958>, 170

Reaction:
RX
Reaction ID: 6674990
Reactant BRN: 1236613
Reactant: oxygen, copper stearate, isopropylbenzene
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 6674990.1
Reaction Classification: Chemical behaviour
Temperature: 100 Cel
Note(s): Handbook
Reference(s):
1. George; Rideal; Robertson, Proc.R.Soc.London A, CODEN: PRLAAZ, 185, <1946>, 288, 297

Reaction:
RX
Reaction ID: 6674989
Reactant BRN: 1236613
Reactant: oxygen, cobalt (II)-stearate, isopropylbenzene
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 6674989.1
Reaction Classification: Chemical behaviour
Temperature: 90 Cel
Subject Studied: Kinetics
Note(s): Handbook
Reference(s):
1. Kucher, Zh.Fiz.Khim., CODEN: ZFKHA9, 33, <1959>, 617, Chem.Abstr., <1959>, 21100

Reaction:
RX
Reaction ID: 6674988
Reactant BRN: 1236613
Reactant: oxygen, cobalt (III)-stearate, isopropylbenzene
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 6674988.1
Reaction Classification: Chemical behaviour
Temperature: 90 Cel
Subject Studied: Kinetics
Note(s): Handbook
Reference(s):
1. Kucher, Zh.Fiz.Khim., CODEN: ZFKHA9, 33, <1959>, 617, Chem.Abstr., <1959>, 21100

Reaction:

RX

Reaction ID:	6674987
Reactant BRN:	1236613
Reactant:	oxygen, barium peroxide, isopropylbenzene
Product BRN:	1908117
Product:	1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	6674987.1
Reaction Classification:	Chemical behaviour
Temperature:	100 - 140 Cel
Subject Studied:	Kinetics
Note(s):	Handbook
Reference(s):	

1. Tsunoda; Matsumoto, Tokai technol. J. Japan, 17(1), <1956>, 17

Reaction:
RX

Reaction ID:	6674985
Reactant BRN:	390030, 1236613
Reactant:	oxygen, anthraquinone, isopropylbenzene
Product BRN:	1908117
Product:	1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	6674985.1
Reaction Classification:	Chemical behaviour
Temperature:	15 Cel
Subject Studied:	Kinetics
Note(s):	Handbook
Reference(s):	

1. Le Berre, Bull.Soc.Chim.Fr., CODEN: BSCFAS, <1959>, 1933

Reaction:
RX

Reaction ID:	6674984
Reactant BRN:	1238185, 1236613
Reactant:	oxygen, benzophenone, isopropylbenzene
Product BRN:	1908117
Product:	1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	2

Reaction Details:
RX

Reaction RID:	6674984.1
Reaction Classification:	Chemical behaviour
Temperature:	100 Cel
Subject Studied:	Kinetics
Note(s):	Handbook
Reference(s):	

1. Le Berre, Bull.Soc.Chim.Fr., CODEN: BSCFAS, <1959>, 1933

RX

Reaction RID:	6674984.2
Reaction Classification:	Chemical behaviour
Temperature:	15 Cel
Subject Studied:	Kinetics
Note(s):	Handbook
Reference(s):	

1. Le Berre, Bull.Soc.Chim.Fr., CODEN: BSCFAS, <1959>, 1933

Reaction:
RX

Reaction ID:	6674983
Reactant BRN:	1236613
Reactant:	oxygen, isopropylbenzene
Product BRN:	1908117
Product:	1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	6

Reaction Details:
RX

Reaction RID:	6674983.1
Reaction Classification:	Chemical behaviour
Temperature:	90 Cel
Subject Studied:	Kinetics
Note(s):	Handbook

Reference(s):
1. Kucher et al., Kolloidn.Zh., CODEN: KOZHAG, 21, <1959>, 309; engl. Ausg. S. 295

RX

Reaction RID:	6674983.2
Reaction Classification:	Chemical behaviour
Temperature:	60 - 120 Cel
Pressure:	20 - 60 Torr
Subject Studied:	Kinetics
Note(s):	Handbook
Pressure:	60 Torr

Reference(s):
1. Takahashi, Kogyo Kagaku Zasshi, CODEN: KGKZA7, 57, <1954>, 363, Chem.Abstr., <1955>, 15789

RX

Reaction RID:	6674983.3
Reaction Classification:	Chemical behaviour
Temperature:	100 Cel
Subject Studied:	Kinetics
Note(s):	Handbook

Reference(s):
1. Le Berre, Bull.Soc.Chim.Fr., CODEN: BSCFAS, <1959>, 1933

RX

Reaction RID:	6674983.4
Reaction Classification:	Chemical behaviour
Temperature:	100 - 140 Cel
Subject Studied:	Kinetics
Note(s):	Handbook

Reference(s):
1. Tsunoda; Matsumoto, Tokai technol. J. Japan, 17(1), <1956>, 17

RX

Reaction RID:	6674983.5
Reaction Classification:	Chemical behaviour
Temperature:	120 Cel
Subject Studied:	Kinetics
Note(s):	Handbook

Reference(s):
1. De Boer et al., Proc.K.Ned.Akad.Wet.Ser.B:Phys.Sci., CODEN: KNWBAA, <B> 61, <1958>, 170

RX

Reaction RID:	6674983.6
Reaction Classification:	Chemical behaviour
Other Conditions:	UV-Licht
Note(s):	Handbook

Reference(s):
1. Hock; Lang, Chem.Ber., CODEN: CHBEAM, 77/79, <1944/1946>, 257, 261

Reaction:

RX

Reaction ID:	5093407
Reactant BRN:	1910303, 1923953
Reactant:	(1-methyl-1-phenyl-ethyl)-peroxyl, Tris-(trimethylsilyl)-silan
Product BRN:	1908117, 2040481
Product:	1-methyl-1-phenyl-ethyl hydroperoxide, Tris-(trimethyl)-silyl
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	5093407.1
Reaction Classification:	Chemical behaviour
Temperature:	72.5 Cel
Other Conditions:	also with Bu3SnH
Subject Studied:	Rate constant

Reference(s):

1. Chatgilialoglu, Chryssostomos; Timokhin, Vitaliy I.; Zaborovskiy, Andriy B.; Lutsyk, Daria S.; Prystansky, Ruslan E., Chem.Commun., CODEN: CHCOFS(5), <1999>, 405 - 406; BABS-6163466

Reaction:
RX

Reaction ID:	5045464
Reactant BRN:	969405
Reactant:	isopropenylbenzene
Product BRN:	1908117
Product:	1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	5045464.1
Reaction Classification:	Preparation
Yield:	72 percent (BRN=1908117)
Reagent:	O2, Et3SiH
Catalyst:	Co(II)(tdcpp)
Solvent:	CH2Cl2, propan-2-ol
Time:	1 hour(s)
Temperature:	28 Cel
Pressure:	760 Torr

Reference(s):

1. Sugamoto, Kazuhiro; Matsushita, Yoh-ichi; Matsui, Takanao, J.Chem.Soc.Perkin Trans.1, CODEN: JCPRB4(23), <1998>, 3989-3998; BABS-6130087

Reaction:
RX

Reaction ID:	4495179
Reactant BRN:	7494642
Reactant:	C9H12*O3
Product BRN:	5508788, 1908117, 1905012, 605842
Product:	cumyl hydrotrioxide, 1-methyl-1-phenyl-ethyl hydroperoxide, 2-phenyl-propan-2-ol, 1-phenyl-ethanone
No. of Reaction Details:	1

Reaction Details:
RX

Reaction RID:	4495179.1
Reaction Classification:	Chemical behaviour
Reagent:	cumene
Solvent:	CH2Cl2

Temperature: -30 Cel
Other Conditions: other temperatures; activation parameters A', A0, .delta.S0<*>, A1; decomposition of ozone complexes with arenes; spectrophotometric study of kinetic regularities; possible mechanism of conversion of ozone complexes
Subject Studied: Rate constant, Thermodynamic data, Kinetics
Reference(s):
1. Avzyanova, E. V.; Kabal'nova, N. N.; Shereshovets, V. V., Russ.Chem.Bl., CODEN: RCBUEY, 45(2), <1996>, 356-359, Izv.Akad.Nauk Ser.Khim., CODEN: IASKEA(2), <1996>, 371-374; BABS-6013599

Reaction:
RX
Reaction ID: 4476259
Reactant BRN: 393006, 1098229, 3610848
Reactant: 2,3,5,6-tetrachloro-<1,4>benzoquinone, methanol, 4-methoxybicumene
Product BRN: 6977835, 1905012, 1908117, 1859781, 3604540
Product: 2,3,5,6-tetrachloro-4-(1-methyl-1-phenyl-ethoxy)-phenol, 2-phenyl-propan-2-ol, 1-methyl-1-phenyl-ethyl hydroperoxide, methyl-(1-methyl-1-phenyl-ethyl)-ether, 2-methoxy-2-(4'-methoxyphenyl)propane
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 4476259.1
Reaction Classification: Chemical behaviour
Yield: 7 percent Spectr. (BRN=6977835), 7 percent Spectr. (BRN=1905012), 41 percent Spectr. (BRN=1908117), 14 percent Spectr. (BRN=1859781), 71 percent Spectr. (BRN=3604540)
Reagent: O2
Solvent: tetrahydrofuran-d8
Other Conditions: Ambient temperature, Irradiation, electron transfer and fragmentation reactions of photogenerated methoxybicumene radical cations; effect of oxygen; back electron transfer in triplet ion pairs; formation of charge-transfer complexes between quinones and methoxybicumenes
Subject Studied: Quantum yield, Rate constant, Product distribution
Reference(s):
1. Maslak, Przemyslaw; Chapman, William H., J.Org.Chem., CODEN: JOCEAH, 61(8), <1996>, 2647-2656; BABS-6013063

Reaction:
RX
Reaction ID: 4344720
Reactant BRN: 2054290
Reactant: peroxybenzoic acid-(1-methyl-1-phenyl-ethyl ester)
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 4344720.1

Reaction Classification: Preparation
Reagent: aq. LiOH
Solvent: tetrahydrofuran
Reference(s):
1. Caldwell, Sarah E.; Porter, Ned. A., J.Amer.Chem.Soc., CODEN: JACSAT, 117(33), <1995>, 8676-8677; BABS-6002112

Reaction:
RX
Reaction ID: 3117018
Reactant BRN: 5508788
Reactant: cumyl hydrotrioxide
Product BRN: 1236613, 1905012, 1908117, 605842
Product: isopropylbenzene, 2-phenyl-propan-2-ol, 1-methyl-1-phenyl-ethyl hydroperoxide, 1-phenyl-ethanone
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 3117018.1
Reaction Classification: Chemical behaviour
Reagent: 2,6-di-tert-butyl-4-methylphenol
Solvent: acetone-d6
Temperature: -18 Cel
Other Conditions: Arrhenius parameters; other temperatures, reagents ratio
Subject Studied: Rate constant, Thermodynamic data, Mechanism
Reference(s):
1. Pryor, William A.; Ohto, Norio; Church, Daniel F., J.Amer.Chem.Soc., CODEN: JACSAT, 104(21), <1982>, 5813-5814; BABS-5693890

Reaction:
RX
Reaction ID: 3090813
Reactant BRN: 5430954
Reactant: <1-(1-methoxy-1-methyl-ethylperoxy)-1-methyl-ethyl>-benzene
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 3090813.1
Reaction Classification: Preparation
Reagent: AcOH, H2O
Solvent: tetrahydrofuran
Time: 24 hour(s)
Note(s): Yield given
Reference(s):
1. Bloodworth, A. J.; Cooksey, Christhopher J.; Korkodilos, Despoina, J.Chem.Soc.Chem.Commun., CODEN: JCCCAT(13), <1992>, 926-927; BABS-5656223

Reaction:
RX
Reaction ID: 2297353
Reactant BRN: 3610848
Reactant: 4-methoxybicumene
Product BRN: 3604540, 1908117, 1905012
Product: 2-methoxy-2-(4'-methoxyphenyl)propane, 1-methyl-1-phenyl-ethyl hydroperoxide, 2-phenyl-propan-2-ol

No. of Reaction Details: 2

Reaction Details:
RX
Reaction RID: 2297353.1
Reaction Classification: Preparation
Yield: 100 percent Spectr. (BRN=3604540), 20 percent Spectr. (BRN=1908117), 78 percent Spectr (BRN=1905012)
Reagent: 1,4-dicyanobenzene, O2
Solvent: tetrahydrofuran, methanol
Temperature: 22 Cel
Other Conditions: Irradiation
Reference(s):
1. Maslak, Przemyslaw; Chapman, William H., Tetrahedron, CODEN: TETRAB, 46(8), <1990>, 2715-2724; BABS-5511977

RX
Reaction RID: 2297353.2
Reaction Classification: Preparation
Yield: 100 percent Spectr. (BRN=3604540), 78 percent Spectr. (BRN=1905012), 20 percent Spectr (BRN=1908117)
Reagent: 1,4-dicyanobenzene, O2
Solvent: tetrahydrofuran, methanol
Temperature: 22 Cel
Other Conditions: Irradiation
Reference(s):
1. Maslak, Przemyslaw; Chapman, William H., Tetrahedron, CODEN: TETRAB, 46(8), <1990>, 2715-2724; BABS-5511977

Reaction:
RX
Reaction ID: 2297352
Reactant BRN: 3610848
Reactant: 4-methoxybicumene
Product BRN: 1908117, 1905012
Product: 1-methyl-1-phenyl-ethyl hydroperoxide, 2-phenyl-propan-2-ol
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 2297352.1
Reaction Classification: Preparation
Reagent: oxygen
Other Conditions: Irradiation
Reference(s):
1. Maslak, Przemyslaw; Chapman, Jr. William H., J.Chem.Soc.Chem.Commun., CODEN: JCCCAT(23), <1989>, 1809-1811; BABS-5918901
2. Maslak, Przemyslaw; Chapman, Jr. William H., J.Chem.Soc.Chem.Commun., CODEN: JCCCAT(23), <1989>, 1809-1811; BABS-5918901

Reaction:
RX
Reaction ID: 2020496
Reactant BRN: 1910303
Reactant: (1-methyl-1-phenyl-ethyl)-peroxyl
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 3

Reaction Details:
RX
Reaction RID: 2020496.1

Reaction Classification: Chemical behaviour
Reagent: tBuSi(H)Me2
Temperature: 72.35 Cel
Subject Studied: Kinetics
Reaction Type: Reduction
Prototype Reaction: Further Variations:, Reagents
Reference(s):
1. Chatgilialoglu, Chryssostomos; Timokhin, Vitaliy I.; Zaborovskiy, Andriy B.; Lutsyk, Daria S.; Prystansky, Ruslan E., J.Chem.Soc.Perkin Trans.2, CODEN: JCPKBH(3), <2000>, 577 - 582; BABS-6238109

RX
Reaction RID: 2020496.2
Reaction Classification: Chemical behaviour
Reagent: diphenylamine, O2, AIBN
Solvent: chlorobenzene
Temperature: 348.5 Cel
Subject Studied: Rate constant
Reference(s):
1. Varlamov, V. T.; Denisov, E. T., Bull.Acad.Sci.USSR Div.Chem.Sci.(Engl.Transl.), CODEN: BACCAT, 36(8), <1987>, 1607-1612, Izv.Akad.Nauk SSSR Ser.Khim., CODEN: IASKA6(8), <1987>, 1738-1743; BABS-5740678

RX
Reaction RID: 2020496.3
Reaction Classification: Chemical behaviour
Reagent: <meso-tetrakis(2,6-dimethyl-3-sulfonatophenyl)porphinato>manganese(III) hydrate, NaNO3, buffer pH 10 (HCO3-/CO32-), H2O2, air
Temperature: 30 Cel
Subject Studied: Rate constant, Equilibrium constant, Mechanism
Reference(s):
1. Arasasingham, Ramesh D.; Jeon, Seungwon; Bruice, Thomas C., J.Amer.Chem.Soc., CODEN: JACSAT, 114(7), <1992>, 2536-2544; BABS-5647883

Reaction:
RX
Reaction ID: 2020495
Reactant BRN: 1910303, 2384864
Reactant: (1-methyl-1-phenyl-ethyl)-peroxyl, hexahydroxy-<1,4>naphthoquinone
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 2020495.1
Reaction Classification: Chemical behaviour
Temperature: 60 Cel
Subject Studied: Rate constant
Reference(s):
1. Boguslavskaya, L. V.; Khrapova, N. G.; Maksimov, O. B., Bull.Acad.Sci.USSR Div.Chem.Sci.(Engl.Transl.), CODEN: BACCAT, 34(7), <1985>, 1345-1350, Izv.Akad.Nauk SSSR Ser.Khim., CODEN: IASKA6(7), <1985>, 1471-1476; BABS-5798349

Reaction:
RX
Reaction ID: 2020494
Reactant BRN: 1910303, 2147084
Reactant: (1-methyl-1-phenyl-ethyl)-peroxyl,

6-ethyl-2,3,5,7,8-pentahydroxy-
<1,4>naphthoquinone
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 2020494.1
Reaction Classification: Chemical behaviour
Temperature: 60 Cel
Subject Studied: Rate constant
Reference(s):
1. Boguslavskaya, L. V.; Khrapova, N. G.; Maksimov, O. B., Bull.Acad.Sci.USSR Div.Chem.Sci.(Engl.Transl.), CODEN: BACCAT, 34(7), <1985>, 1345-1350, Izv.Akad.Nauk SSSR Ser.Khim., CODEN: IASKA6(7), <1985>, 1471-1476; BABS-5798349

Reaction:
RX
Reaction ID: 2020493
Reactant BRN: 1910303, 2146863
Reactant: (1-methyl-1-phenyl-ethyl)-peroxyl,
2-acetyl-3,5,6,8-tetrahydroxy-
<1,4>naphthoquinone
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 2020493.1
Reaction Classification: Chemical behaviour
Temperature: 60 Cel
Subject Studied: Rate constant
Reference(s):
1. Boguslavskaya, L. V.; Khrapova, N. G.; Maksimov, O. B., Bull.Acad.Sci.USSR Div.Chem.Sci.(Engl.Transl.), CODEN: BACCAT, 34(7), <1985>, 1345-1350, Izv.Akad.Nauk SSSR Ser.Khim., CODEN: IASKA6(7), <1985>, 1471-1476; BABS-5798349

Reaction:
RX
Reaction ID: 2020492
Reactant BRN: 1910303, 2131494
Reactant: (1-methyl-1-phenyl-ethyl)-peroxyl,
2,3,5,6,8(oder 2,5,6,7,8)-pentahydroxy-
<1,4>naphthoquinone
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 2020492.1
Reaction Classification: Chemical behaviour
Temperature: 60 Cel
Subject Studied: Rate constant
Reference(s):
1. Boguslavskaya, L. V.; Khrapova, N. G.; Maksimov, O. B., Bull.Acad.Sci.USSR Div.Chem.Sci.(Engl.Transl.), CODEN: BACCAT, 34(7), <1985>, 1345-1350, Izv.Akad.Nauk SSSR Ser.Khim., CODEN: IASKA6(7), <1985>, 1471-1476; BABS-5798349

Reaction:
RX
Reaction ID: 2020491
Reactant BRN: 1910303, 2003780
Reactant: (1-methyl-1-phenyl-ethyl)-peroxyl, 2-acetyl-3,5,6,7,8-pentahydroxy-<1,4>naphthoquinone
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 2020491.1
Reaction Classification: Chemical behaviour
Temperature: 60 Cel
Subject Studied: Rate constant
Reference(s):
1. Boguslavskaya, L. V.; Khrapova, N. G.; Maksimov, O. B., Bull.Acad.Sci.USSR Div.Chem.Sci.(Engl.Transl.), CODEN: BACCAT, 34(7), <1985>, 1345-1350, Izv.Akad.Nauk SSSR Ser.Khim., CODEN: IASKA6(7), <1985>, 1471-1476; BABS-5798349

Reaction:
RX
Reaction ID: 1709985
Reactant BRN: 1236613
Reactant: isopropylbenzene
Product BRN: 1908117, 1905012, 605842, 969616, 2056090
Product: 1-methyl-1-phenyl-ethyl hydroperoxide, 2-phenyl-propan-2-ol, 1-phenyl-ethanone, phenol, bis-(1-methyl-1-phenyl-ethyl)-peroxide
No. of Reaction Details: 2

Reaction Details:
RX
Reaction RID: 1709985.1
Reaction Classification: Chemical behaviour
Yield: 88.8 percent (BRN=1908117)
Reagent: O2, AlCl-phthalocyanine
Time: 1.1 hour(s)
Temperature: 130 Cel
Other Conditions: mechanism; other times and temperatures; other phthalocyanine; further reagent; various concentrations of reagent; activation energies
Subject Studied: Kinetics, Thermodynamic data, Product distribution
Reference(s):
1. Kropf, Heinz; Vogel, Werner, J.Chem.Res.Miniprint, CODEN: JRMPDM(1), <1986>, 0315-0342; BABS-5867413
RX
Reaction RID: 1709985.2
Reaction Classification: Chemical behaviour
Yield: 92.8 percent (BRN=1908117)
Reagent: O2, Sn(OH)2-phthalocyanine
Time: 5.7 hour(s)
Temperature: 110 Cel
Other Conditions: mechanism; other times and temperatures; other phthalocyanines; various concentrations of reagent; activation energies
Subject Studied: Kinetics, Thermodynamic data, Product

distribution

Reference(s):

1. Kropf, Heinz; Vogel, Werner; Hopf, Christiane, J.Chem.Res.Miniprint, CODEN: JRMPDM(1), <1986>, 0301-0314; BABS-5867412

Reaction:

RX

Reaction ID:	1709984
Reactant BRN:	1236613
Reactant:	isopropylbenzene
Product BRN:	1908117, 605842, 1905012, 969405, 969616
Product:	1-methyl-1-phenyl-ethyl hydroperoxide, 1-phenyl-ethanone, 2-phenyl-propan-2-ol, isopropenylbenzene, phenol
No. of Reaction Details:	2

Reaction Details:

RX

Reaction RID:	1709984.1
Reaction Classification:	Chemical behaviour
Reagent:	O2
Catalyst:	zinc naphthenate-1,10-phenanthroline
Time:	8 hour(s)
Temperature:	100 Cel
Other Conditions:	rate constants between 100-130 deg C
Subject Studied:	Kinetics, Product distribution

Reference(s):

1. Kozlov, S. K.; Tovstokhat'ko, F. I.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 59, <1986>, 1284-1286, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 59(6), <1986>, 1378-1380; BABS-5877997

RX

Reaction RID:	1709984.2
Reaction Classification:	Chemical behaviour
Reagent:	O2
Catalyst:	1.5E-4 zinc naphthenate
Time:	3 hour(s)
Temperature:	110 Cel
Other Conditions:	activation energy; different catalyst, catalyst concentrations, reaction times and temperatures
Subject Studied:	Product distribution, Kinetics, Thermodynamic data

Reference(s):

1. Kozlov, S. K.; Tovstokhat'ko, F. I.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 59, <1986>, 122-127, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 59(1), <1986>, 134-139; BABS-5875963

Reaction:

RX

Reaction ID:	1709981
Reactant BRN:	1236613
Reactant:	isopropylbenzene
Product BRN:	605842, 1908117
Product:	1-phenyl-ethanone, 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	1

Reaction Details:

RX

Reaction RID:	1709981.1
Reaction Classification:	Chemical behaviour
Catalyst:	<ZnNf2>/o-phenanthroline

Time: 6 hour(s)
Temperature: 110 Cel
Other Conditions: depemdence of the initial rate of oxidation on the catalyst-activator ratio; effect of various catalysts; influence of the catalyst concentration on the selectivity for CHP
Subject Studied: Product distribution
Reference(s):
1. Kozlov, S. K.; Tovstokhat'ko, F. I.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 59(5), <1986>, 1061-1063, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 59(5), <1986>, 1138-1140; BABS-5881749

Reaction:
RX
Reaction ID: 1709979
Reactant BRN: 1236613
Reactant: isopropylbenzene
Product BRN: 1905012, 1908117, 605842, 5508788
Product: 2-phenyl-propan-2-ol, 1-methyl-1-phenyl-ethyl hydroperoxide, 1-phenyl-ethanone, cumyl hydrotrioxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 1709979.1
Reaction Classification: Preparation
Yield: 2 percent (BRN=5508788)
Reagent: ozone
Solvent: acetone-d6
Time: 3 hour(s)
Temperature: -40 Cel
Note(s): Yields of byproduct given
Reference(s):
1. Pryor, William A.; Ohto, Norio; Church, Daniel F., J.Amer.Chem.Soc., CODEN: JACSAT, 104(21), <1982>, 5813-5814; BABS-5693890

Reaction:
RX
Reaction ID: 1709978
Reactant BRN: 1236613
Reactant: isopropylbenzene
Product BRN: 1908117, 1905012, 605842, 2056090
Product: 1-methyl-1-phenyl-ethyl hydroperoxide, 2-phenyl-propan-2-ol, 1-phenyl-ethanone, bis-(1-methyl-1-phenyl-ethyl)-peroxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 1709978.1
Reaction Classification: Chemical behaviour
Yield: 0.36 mol (BRN=1908117), 0.035 mol (BRN=1905012), 0.0014 mol (BRN=605842), 0.0015 mol (BRN=2056090)
Reagent: 2,2,3,3-tetraphenylbutane, O2
Time: 48 hour(s)
Temperature: 29.9 Cel
Pressure: 304 Torr
Other Conditions: variation of reagent, pressure, reaction time
Subject Studied: Rate constant, Product distribution
Reference(s):

1. Howard, J. A.; Bennett, J. E.; Brunton, G., Can.J.Chem., CODEN: CJCHAG, 59, <1981>, 2253-2260; BABS-5663809

Reaction:
RX

Reaction ID:	1709977
Reactant BRN:	1236613
Reactant:	isopropylbenzene
Product BRN:	1905012, 1908117, 605842
Product:	2-phenyl-propan-2-ol, 1-methyl-1-phenyl-ethyl hydroperoxide, 1-phenyl-ethanone
No. of Reaction Details:	5

Reaction Details:
RX

Reaction RID:	1709977.1
Reaction Classification:	Preparation
Yield:	14 percent Spectr. (BRN=1905012), 8 percent Spectr. (BRN=1908117), 9 percent Spectr (BRN=605842)
Reagent:	dioxygen
Catalyst:	cerium (IV) ammonium nitrate,
Solvent:	acetonitrile
Time:	5 hour(s)
Other Conditions:	Ambient temperature, Irradiation
Note(s):	Title compound not separated from byproducts

Reference(s):
1. Baciocchi, E.; Giacco, T. Del; Sebastiani, G. V.; Rol, C., Tetrahedron Lett., CODEN: TELEAY, 26(28), <1985>, 3353-3356; BABS-5552479

RX

Reaction RID:	1709977.2
Reaction Classification:	Preparation
Yield:	9 percent Spectr. (BRN=605842), 8 percent Spectr. (BRN=1908117), 14 percent Spectr (BRN=1905012)
Reagent:	dioxygen
Catalyst:	cerium (IV) ammonium nitrate,
Solvent:	acetonitrile
Time:	5 hour(s)
Other Conditions:	Ambient temperature, Irradiation
Note(s):	Title compound not separated from byproducts

Reference(s):
1. Baciocchi, E.; Giacco, T. Del; Sebastiani, G. V.; Rol, C., Tetrahedron Lett., CODEN: TELEAY, 26(28), <1985>, 3353-3356; BABS-5552479

RX

Reaction RID:	1709977.3
Reaction Classification:	Chemical behaviour
Reagent:	O2
Catalyst:	1.5E-4 M MgNf2, 6E-4 M Phen
Time:	4 hour(s)
Temperature:	110 Cel
Other Conditions:	different catalytic systems and reaction times
Subject Studied:	Product distribution

Reference(s):
1. Kozlov, S. K.; Tovstokhat'ko, F. I.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 59, <1986>, 205-207, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 59(1), <1986>, 217-219; BABS-5876061

RX

Reaction RID:	1709977.4
Reaction Classification:	Preparation
Yield:	9 percent Spectr. (BRN=605842), 14 percent Spectr. (BRN=1905012), 8 percent Spectr

(BRN=1908117)
Reagent: dioxygen
Catalyst: cerium (IV) ammonium nitrate,
Solvent: acetonitrile
Time: 5 hour(s)
Other Conditions: Ambient temperature, Irradiation
Note(s): Title compound not separated from byproducts
Reference(s):
1. Baciocchi, E.; Giacco, T. Del; Sebastiani, G. V.; Rol, C., Tetrahedron Lett., CODEN: TELEAY, 26(28), <1985>, 3353-3356; BABS-5552479

RX
Reaction RID: 1709977.5
Reaction Classification: Chemical behaviour
Yield: 38.0 percent (BRN=1908117), 0.28 percent (BRN=605842), 2.24 percent (BRN=1905012)
Reagent: O2
Catalyst: zinc pyrazolonate, 1,10-phenanthroline
Time: 5.0 hour(s)
Temperature: 110 Cel
Other Conditions: effect of further monodentate and bidentate activators
Subject Studied: Product distribution
Reference(s):
1. Kozlov, S. K.; Tovstokhat'ko, F. I.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 59, <1986>, 1287-1290, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 59(6), <1986>, 1381-1384; BABS-5877998

Reaction:
RX
Reaction ID: 278976
Reactant BRN: 1905012
Reactant: 2-phenyl-propan-2-ol
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 278976.1
Reaction Classification: Preparation
Reagent: aqueous H2O2, H2SO4
Note(s): Handbook
Reference(s):
1. Ross; Huettel, Chem.Ber., CODEN: CHBEAM, 89, <1956>, 2641

Reaction:
RX
Reaction ID: 267155
Reactant BRN: 1855036
Reactant: (.alpha.-chloro-isopropyl)-benzene
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 267155.1
Reaction Classification: Preparation
Reagent: aqueous H2O2, NaHCO3, H2SO4
Note(s): Handbook
Reference(s):
1. Ross; Huettel, Chem.Ber., CODEN: CHBEAM, 89, <1956>, 2641

Reaction:
RX

Reaction ID:	108026
Reactant BRN:	1236613
Reactant:	isopropylbenzene
Product BRN:	1908117
Product:	1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details:	36

Reaction Details:
RX

Reaction RID:	108026.1
Reaction Classification:	Preparation
Reagent:	steam, oxygen
Note(s):	Handbook

Reference(s):
1. Patent: Distillers Co. DE 819092 1949, DRP/DRBP Org.Chem.

RX

Reaction RID:	108026.2
Reaction Classification:	Preparation
Reagent:	anthraquinone, oxygen
Other Conditions:	Irradiation.UV-Belichtung
Note(s):	Handbook

Reference(s):
1. Le Berre, Bull.Soc.Chim.Fr., CODEN: BSCFAS, <1959>, 1933, 1935

RX

Reaction RID:	108026.3
Reaction Classification:	Preparation
Reagent:	terephthalic acid, oxygen
Note(s):	Handbook

Reference(s):
1. Patent: Montecatini US 2799711 1956

RX

Reaction RID:	108026.4
Reaction Classification:	Preparation
Reagent:	acetoacetic acid ethyl ester, oxygen
Note(s):	Handbook

Reference(s):
1. Patent: Soc. Usines Chim. Rhone-Poulenc US 2674629 1953

RX

Reaction RID:	108026.5
Reaction Classification:	Preparation
Reagent:	cerium naphthenate, oxygen
Note(s):	Handbook

Reference(s):
1. Patent: Farbenfabr. Bayer US 2655545 1951
2. Patent: Farbenfabr. Bayer DE 889443 1951, DRP/DRBP Org.Chem.
3. Patent: Farbenfabr. Bayer DE 969744 1950

RX

Reaction RID:	108026.6
Reaction Classification:	Preparation
Reagent:	oxygen
Temperature:	85 Cel
Other Conditions:	UV-Licht
Note(s):	Handbook

Reference(s):
1. George; Rideal; Robertson, Proc.R.Soc.London A, CODEN: PRLAAZ, 185, <1946>, 288, 292, 297
2. Hock; Lang, Chem.Ber., CODEN: CHBEAM, 77/79, <1944/1946>, 257, 261

RX

Reaction RID:	108026.7
Reaction Classification:	Preparation
Reagent:	Na2CO3, oxygen
Note(s):	Handbook

Reference(s):
1. Patent: Allied Chem. & Dye Corp. US 2629744 1950
2. Patent: Allied Chem. & Dye Corp. US 2681936 1950

RX

Reaction RID: 108026.8
Reaction Classification: Preparation
Reagent: aqueous sodium stearate, oxygen
Note(s): Handbook
Reference(s):
1. Armstrong et al., J.Chem.Soc., CODEN: JCSOA9, <1950>, 666
2. Patent: Hercules Powder Co. US 2547938 1947

RX

Reaction RID: 108026.9
Reaction Classification: Chemical behaviour
Yield: 18 percent Chromat. (BRN=1908117)
Reagent: 1O2, 9-diazofluorene, meso-tetraphenylporphine
Solvent: benzene
Time: 30 min
Temperature: 20 Cel
Other Conditions: Irradiation, O-transfer reaction; trapping of carbonyl oxide from 9-diazofluorene
Subject Studied: Product distribution, Mechanism
Reference(s):
1. Sawaki, Yasuhiko; Kato, Hiroshi; Ogata, Yoshiro, J.Amer.Chem.Soc., CODEN: JACSAT, 103(13), <1981>, 3832-3837; BABS-5691150

RX

Reaction RID: 108026.10
Reaction Classification: Preparation
Reagent: oxygen
Time: 8 hour(s)
Temperature: 110 Cel
Reference(s):
1. Kozlov, S. K.; Tovstokhat'ko, F. I.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 58, <1985>, 2490-2494, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 58(12), <1985>, 2696-2701; BABS-5877528

RX

Reaction RID: 108026.11
Reaction Classification: Chemical behaviour
Reagent: p-dihydroxybenzene, azoisobutyronitrile
Solvent: acetic acid
Temperature: 60 Cel
Other Conditions: other reagent, other solvent, other temperature, various concentrations of the substrate, various concentrations of the reagent
Subject Studied: Kinetics, Rate constant
Reference(s):
1. Nikolaevskii, A.N.; Kaloerova, V.G.; Kucher, R.V., J.Org.Chem.USSR (Engl.Transl.), CODEN: JOCYA9, 17, <1981>, 510-514, Zh.Org.Khim., CODEN: ZORKAE, <1> 17(3), <1981>, 595-600; BABS-5631011

RX

Reaction RID: 108026.12
Reaction Classification: Preparation
Reagent: azobisisobutyronitrile
Time: 6 hour(s)
Temperature: 95 Cel
Reference(s):
1. Kozlov, S. K.; Tovstokhat'ko, F. I.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 59(5), <1986>, 993-996, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 59(5), <1986>, 1072-1076; BABS-5881743

RX

Reaction RID: 108026.13
Reaction Classification: Preparation
Reagent: oxygen
Note(s): Handbook
Reference(s):
1. Patent: Shell Devel. Co. US 2633476 1952

RX

Reaction RID: 108026.14
Reaction Classification: Chemical behaviour
Reagent: O2, diethyl ester of 2-chloro-2(1-cyclohexenyl)ethylenylphosphonic acid, AIBN
Temperature: 59.9 Cel
Other Conditions: antioxidant effect of further dialkyl esters and dialkyl thioesters of 2-chloro-2(1-cyclohexenyl)ethylenylphosphonic acid at various temperature; effect of O2 partial pressure on the initiated oxidation
Subject Studied: Mechanism
Reference(s):
1. Ivanov, Slavi K.; Shopova, Nicolaida St.; Angelov, Christo M., Phosphorus Sulfur, CODEN: PREEDF, 26, <1986>, 105-110; BABS-5827359

RX

Reaction RID: 108026.15
Reaction Classification: Preparation
Reagent: O2, azobisisobutyronitrile
Catalyst: monophenanthrolinezinc(II) pyrazolonate
Temperature: 75 Cel
Pressure: 760 Torr
Reference(s):
1. Kozlov, S. K.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 59(7), <1986>, 1519-1521, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 59(7), <1986>, 1633-1635; BABS-5883617

RX

Reaction RID: 108026.16
Reaction Classification: Chemical behaviour
Reagent: O2, 2-cyano-2-propyl hydroperoxide
Temperature: 90 Cel
Other Conditions: further oxidation initiators, further temperatures
Subject Studied: Kinetics
Reference(s):
1. Burghardt, Aleksandra; Kulicki, Zdzislaw, Monatsh.Chem., CODEN: MOCMB7, 115, <1984>, 87-92; BABS-5796729

RX

Reaction RID: 108026.17
Reaction Classification: Preparation
Reagent: O2, 2-cyano-2-propyl hydroperoxide
Reference(s):
1. Burghardt, Aleksandra; Kulicki, Zdzislaw, Monatsh.Chem., CODEN: MOCMB7, 115, <1984>, 87-92; BABS-5796729

RX

Reaction RID: 108026.18
Reaction Classification: Chemical behaviour
Reagent: O2, AIBN
Temperature: 60 Cel
Other Conditions: further reagents, initiation rates, kinetic curves
Reference(s):
1. Boguslavskaya, L. V.; Khrapova, N. G.; Maksimov, O. B., Bull.Acad.Sci.USSR Div.Chem.Sci.(Engl.Transl.), CODEN: BACCAT, 34(7), <1985>, 1345-1350, Izv.Akad.Nauk SSSR Ser.Khim., CODEN: IASKA6(7), <1985>, 1471-1476; BABS-5798349

RX

Reaction RID: 108026.19

Reaction Classification: Chemical behaviour
Reagent: O2
Catalyst: copper(I) and copper(II) compounds
Temperature: 70 Cel
Other Conditions: var. pressure O2, also pyridine as reagent
Subject Studied: Mechanism
Reference(s):
1. Stec, Zbigniew; Kulicki, Zdzislaw, Pol.J.Chem., CODEN: PJCHDQ, 57(7-9), <1983>, 941-945; BABS-5804264

RX

Reaction RID: 108026.20
Reaction Classification: Chemical behaviour
Reagent: oxygen
Catalyst: CdNf2
Time: 8 hour(s)
Temperature: 110 Cel
Other Conditions: var. catalyst
Subject Studied: Kinetics
Reference(s):
1. Kozlov, S. K.; Tovstokhat'ko, F. I.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 58, <1985>, 2490-2494, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 58(12), <1985>, 2696-2701; BABS-5877528

RX

Reaction RID: 108026.21
Reaction Classification: Chemical behaviour
Reagent: O2, azobisisobutyronitrile
Catalyst: monophenanthrolinezinc(II) pyrazolonate
Temperature: 60 - 85 Cel
Pressure: 760 Torr
Other Conditions: further pressures, catalyst
Subject Studied: Mechanism, Thermodynamic data, Kinetics
Reference(s):
1. Kozlov, S. K.; Potekhin, V. M., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 59(7), <1986>, 1519-1521, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 59(7), <1986>, 1633-1635; BABS-5883617

RX

Reaction RID: 108026.22
Reaction Classification: Chemical behaviour
Reagent: O2
Catalyst: Co(acac)2
Time: 10 hour(s)
Temperature: 60 Cel
Other Conditions: with crown ethers; rate of oxidation
Subject Studied: Product distribution
Reference(s):
1. Kochinashvili, M. V.; Kuramshin, E. M.; Kotlyar, S. A.; Zlot-skii, S. S.; Rakhmankulov, D. L., J.Appl.Chem.USSR (Engl.Transl.), CODEN: JAPUAW, 62(7.2), <1989>, 1562-1564, Zh.Prikl.Khim.(Leningrad), CODEN: ZPKHAB, 62(7), <1989>, 1681-1684; BABS-5512252

RX

Reaction RID: 108026.23
Reaction Classification: Preparation
Reagent: NaCl, KNO3, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Allied Chem. & Dye Corp. US 2776999 1952

RX

Reaction RID: 108026.24
Reaction Classification: Chemical behaviour
Reagent: O2
Catalyst: different cobalt catalysts
Subject Studied: Kinetics
Reference(s):

1. Setinek, Karel; Drapakova, Stanislava; Prokop, Zdenek, Collect.Czech.Chem.Commun., CODEN: CCCCAK, 51(9), <1986>, 1958-1963; BABS-5561803

RX

Reaction RID: 108026.25
Reaction Classification: Chemical behaviour
Reagent: dioxygen, cumene hydroperoxide, 2,4-pentanedionates of Cr(III)
Solvent: heptane
Temperature: 60 Cel
Other Conditions: other radical initiator and 2,4-pentanedionates of 3d-transition metals, various concentration of the reagents
Reference(s):
1. Lunak, Stanislav; Chmelikova, Ruzena; Lederer, Pavel, Collect.Czech.Chem.Commun., CODEN: CCCCAK, 56(2), <1991>, 344-350; BABS-5535278

RX

Reaction RID: 108026.26
Reaction Classification: Chemical behaviour
Reagent: 1,4,7,10,13,16-hexaoxacyclooctadecane
Temperature: 60 Cel
Other Conditions: oxidation
Subject Studied: Rate constant
Reference(s):
1. Kochinashvili, M. V.; Kuramshin, E. M.; Zlot-skii, S. S.; Rakhmankulov, D. L., J.Gen.Chem.USSR (Engl.Transl.), CODEN: JGCHA4, 60(3.2), <1990>, 574-577, Zh.Obshch.Khim., CODEN: ZOKHA4, 60(3), <1990>, 657-660; BABS-5537965

RX

Reaction RID: 108026.27
Reaction Classification: Chemical behaviour
Reagent: O2
Catalyst: phenanthroline-pyrazolone-Zn(II)-complex
Temperature: 110 Cel
Other Conditions: other temperature, other catalysts, additives
Subject Studied: Kinetics
Reference(s):
1. Kozlov, S. K., J.Gen.Chem.USSR (Engl.Transl.), CODEN: JGCHA4, 60(1.2), <1990>, 153-157, Zh.Obshch.Khim., CODEN: ZOKHA4, 60(1), <1990>, 175-180; BABS-5531529

RX

Reaction RID: 108026.28
Reaction Classification: Chemical behaviour
Reagent: MeOCH2CH(SH)CH2NH(m-MePh), air, azoisobutyronitrile
Solvent: chlorobenzene
Temperature: 110 Cel
Other Conditions: var. methoxy-substituted 1,2-aminopropanethiols
Subject Studied: Mechanism, Rate constant
Reference(s):
1. Farzaliyev, V. M.; Allakhverdiyev, M. A.; Rzayeva, I. A.; Akhundova, M. M.; Nasirova, F. N.; Guseinova, A. T., Pet.Chem.USSR (Engl.Transl.), CODEN: PECHAM, 34(6), <1994>, 524-529, Neftekhimiya, CODEN: NEFTAH, 34(6), <1994>, 537-541; BABS-5971722

RX

Reaction RID: 108026.29
Reaction Classification: Chemical behaviour
Reagent: oxygen
Catalyst: tetraethylammonium perchlorate
Solvent: chlorobenzene, benzonitrile
Time: 210 min

Temperature: 84.85 Cel
Subject Studied: Kinetics
Reaction Type: Oxidation
Prototype Reaction: Further Variations:, Catalysts
Reference(s):
1. Opeida, I. A.; Zalevskaya, N. M., Russ.J.Org.Chem., CODEN: RJOCEQ, 32(4), <1996>, 524 - 529, Zh.Org.Khim., CODEN: ZORKAE, 32(4), <1996>, 545 - 550; BABS-6148286

RX

Reaction RID: 108026.30
Reaction Classification: Chemical behaviour
Reagent: O2, aq. sodium laurate
Temperature: 75 Cel
Pressure: 750.06 Torr
Other Conditions: rate of emulsion oxidation; other sodium alkylcarboxylaates, var. organic solvents, var. pH
Subject Studied: Mechanism
Reference(s):
1. Panicheva, L. P.; Turnaeva, E. A.; Panichev, S. A.; Yuffa, A. Ya., Pet.Chem.USSR (Engl.Transl.), CODEN: PECHAM, 38(3), <1998>, 164 - 169, Neftekhimiya, CODEN: NEFTAH, 338, <1998>, 179 - 184; BABS-6172166

RX

Reaction RID: 108026.31
Reaction Classification: Preparation
Reagent: NaCl, BaSO4, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Allied Chem. & Dye Corp. US 2776999 1952

RX

Reaction RID: 108026.32
Reaction Classification: Preparation
Reagent: aqueous NaOH, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Hercules Powder Co. US 2619510 1951
2. Patent: Hercules Powder Co. US 2663740 1952
3. Patent: Hercules Powder Co. US 2548435 1946
4. Patent: Hercules Powder Co. US 2632772 1948
5. Patent: Distillers Co. DE 926426 1949, DRP/DRBP Org.Chem.

RX

Reaction RID: 108026.33
Reaction Classification: Preparation
Reagent: aqueous NaOH, ozone, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Bergwerksges. Hibernia US 2827493 1952

RX

Reaction RID: 108026.34
Reaction Classification: Preparation
Reagent: NaHCO3, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Allied Chem. & Dye Corp. US 2577768 1949

RX

Reaction RID: 108026.35
Reaction Classification: Preparation
Reagent: Ca(OH)2, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Hercules Powder Co. US 2632774 1949

RX

Reaction RID: 108026.36
Reaction Classification: Preparation

Reagent: CaCO3, oxygen
Note(s): Handbook
Reference(s):
1. Patent: Allied Chem. & Cye Corp. US 2613227 1950
2. Patent: Allied Chem. & Cye Corp. DE 864398 1951

Reaction:
RX
Reaction ID: 51759
Reactant BRN: 1236613, 1098229
Reactant: isopropylbenzene, methanol
Product BRN: 1908117
Product: 1-methyl-1-phenyl-ethyl hydroperoxide
No. of Reaction Details: 1

Reaction Details:
RX
Reaction RID: 51759.1
Reaction Classification: Preparation
Reagent: oxygen
Note(s): Handbook
Reference(s):
1. Patent: Montecatini US 2843633 1954

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FILE COVERS 1907 - 6 Sep 2002 VOL 137 ISS 11
FILE LAST UPDATED: 5 Sep 2002 (20020905/ED)

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```
=> s l3 and (water or h2o or aqueous)
          4694 L3
       1940644 WATER
        212526 WATERS
       1991299 WATER
                 (WATER OR WATERS)
        918320 H2O
        147657 AQUEOUS
             1 AQUEOUSES
        147658 AQUEOUS
                 (AQUEOUS OR AQUEOUSES)
        926014 AQ
           118 AQS
        926086 AQ
                 (AQ OR AQS)
        961992 AQUEOUS
                 (AQUEOUS OR AQ)
L4         819 L3 AND (WATER OR H2O OR AQUEOUS)

=> s l4 and (mixture or composition)
         60967 MIXTURE
        118399 MIXTURES
        176682 MIXTURE
                 (MIXTURE OR MIXTURES)
       1323492 MIXT
        458147 MIXTS
       1620917 MIXT
                 (MIXT OR MIXTS)
       1667750 MIXTURE
                 (MIXTURE OR MIXT)
        592411 COMPOSITION
        239065 COMPOSITIONS
        827686 COMPOSITION
                 (COMPOSITION OR COMPOSITIONS)
       1164582 COMPN
        456556 COMPNS
       1419992 COMPN
                 (COMPN OR COMPNS)
       1853040 COMPOSITION
                 (COMPOSITION OR COMPN)
L5         375 L4 AND (MIXTURE OR COMPOSITION)
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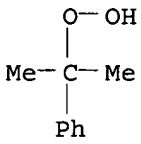
=> s l1
L11 18 L1

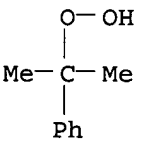
=> d ide

L11 ANSWER 1 OF 18 CHEMCATS COPYRIGHT 2002 ACS
Accession No. (AN): 2002:1282035 CHEMCATS
Catalog Name (CO): Acros Organics
Publication Date (PD): 16 Apr 2002
Order Number (ON): 34996
Chemical Name (CN): Cumyl hydroperoxide
Synonym (CN): Cumolhydroperoxid; Cumene hydroperoxide;
Isopropylbenzolhydroperoxid;
Isopropylbenzolhydroperoxid; Cumene hydroperoxide
CAS Registry No. (RN): **80-15-9**
Structure :



=> d all

L11 ANSWER 1 OF 18 CHEMCATS COPYRIGHT 2002 ACS
Accession No. (AN): 2002:1282035 CHEMCATS
Catalog Name (CO): Acros Organics
Publication Date (PD): 16 Apr 2002
Order Number (ON): 34996
Chemical Name (CN): Cumyl hydroperoxide
Synonym (CN): Cumolhydroperoxid; Cumene hydroperoxide;
Isopropylbenzolhydroperoxid;
Isopropylbenzolhydroperoxid; Cumene hydroperoxide
CAS Registry No. (RN): **80-15-9**
Purity : 80%
Structure :



PROPERTIES

Density : 1.06
Melting Point : -30 C
Flash Point : 83.00

REGULATORY INVENTORIES

TSCA : Y
EINECS : 201-254-7

REFERENCES

RTECS : MX2450000

PRICES

Quantity : 5.00 G, Price: $8.90
Quantity : 250.00 G, Price: $27.00

COMPANY INFORMATION

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Hungary

Tel.: **361 214 5000
Fax: **361 214 5000

ACCESSION NUMBER: 1977:600365 CAPLUS
DOCUMENT NUMBER: 87:200365
TITLE: Study of intermolecular interactions in the **cumene hydroperoxide-water** system by the proton magnetic resonance method
AUTHOR(S): Markaryan, Sh. A.; Beileryan, N. M.; Grigoryan, S. K.
CORPORATE SOURCE: Erevan. Gos. Univ., Yerevan, USSR
SOURCE: Zh. Fiz. Khim. (1977), 51(9), 2385-7
CODEN: ZFKHA9
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB NMR data indicated that in the title system proton exchange occurs between PhCMe2OOH (I) and H2O. At 97:3 I-H2O the rate const. for this exchange is 85 s-1. Interactions between the .pi. system of I and H2O also occur.

IT Protonation and Proton transfer reaction
(in **cumene hydroperoxide-water** system)
IT Nuclear magnetic resonance
(proton exchange in **cumene hydroperoxide-water** system in relation to)
IT 7732-18-5, properties
RL: PRP (Properties)
(interaction of, with cumene hydroperoxide)
IT 80-15-9
RL: PRP (Properties)
(interaction of, with water)

ACCESSION NUMBER: 1977:600365 CAPLUS
DOCUMENT NUMBER: 87:200365
TITLE: Study of intermolecular interactions in the **cumene hydroperoxide-water** system by the proton magnetic resonance method
AUTHOR(S): Markaryan, Sh. A.; Beileryan, N. M.; Grigoryan, S. K.
CORPORATE SOURCE: Erevan. Gos. Univ., Yerevan, USSR
SOURCE: Zh. Fiz. Khim. (1977), 51(9), 2385-7
CODEN: ZFKHA9
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB NMR data indicated that in the title system proton exchange occurs between PhCMe2OOH (I) and H2O. At 97:3 I-H2O the rate const. for this exchange is 85 s-1. Interactions between the .pi. system of I and H2O also occur.

IT Protonation and Proton transfer reaction
(in **cumene hydroperoxide-water** system)
IT Nuclear magnetic resonance
(proton exchange in **cumene hydroperoxide-water** system in relation to)
IT 7732-18-5, properties
RL: PRP (Properties)
(interaction of, with cumene hydroperoxide)
IT 80-15-9
RL: PRP (Properties)
(interaction of, with water)

```
=> s l5 and 1%
       7227471 1%
                 (1)
L6          256 L5 AND 1%

=> s l5 and weight percent
          87980 WEIGHT
           7556 WEIGHTS
          93412 WEIGHT
                 (WEIGHT OR WEIGHTS)
        1272798 WT
          94569 WTS
        1321675 WT
                 (WT OR WTS)
        1348263 WEIGHT
                 (WEIGHT OR WT)
          67936 PERCENT
           1270 PERCENTS
          69001 PERCENT
                 (PERCENT OR PERCENTS)
           2940 WEIGHT PERCENT
                 (WEIGHT(W)PERCENT)
L7             0 L5 AND WEIGHT PERCENT

=> s l5 and percent water
          67936 PERCENT
           1270 PERCENTS
          69001 PERCENT
                 (PERCENT OR PERCENTS)
        1940644 WATER
         212526 WATERS
        1991299 WATER
                 (WATER OR WATERS)
            233 PERCENT WATER
                 (PERCENT(W)WATER)
L8             0 L5 AND PERCENT WATER

=> s l5 and % water
        1940644 WATER
         212526 WATERS
        1991299 % WATER
                 (WATER OR WATERS)
L9           209 L5 AND % WATER

=> d 200-209 ibib abs

L9   ANSWER 200 OF 209  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         1968:22368  CAPLUS
DOCUMENT NUMBER:          68:22368
TITLE:                    Copolymer of vinyl acetate and acrylamide
INVENTOR(S):              Lanthier, Raymond
PATENT ASSIGNEE(S):       Shawinigan Chemicals Ltd.
SOURCE:                   Brit., 10 pp.
                          CODEN: BRXXAA
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     GB 1092030              19671122
PRIORITY APPLN. INFO.:                  CA                   19651015
AB   A process for prepg. aq. emulsions of a random copolymer of
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vinyl acetate (I) and acrylamide (II) contg. 6-15% II is described. Specific proportions of the monomers are copolymd. in an **aq**. medium with a redox catalyst system at a suitable pH (5-7) in a suitable temp. range (40-5.degree.) and with addn. of the ingredients to the polymn. medium in a manner that precluded undesired homopolymn. of either monomer. Thus, 30 g. I contg. 0.5 ml. tert-BuOOH (III) was added to a **mixt**. of **water** 250, II 10, and Gafac PE-510 (a polyoxyethylenated phosphate anionic surfactant) 1 g. The **mixt**. was agitated while a stream of N was introduced and heated to 40.degree.. Three solns. of 2 g. NaHSO3 and 2 g. Na2HPO4 in 50 ml. **H2O**, 30 g. II in 70 ml. **water**, and 1.5 ml. III in 348 g. I were added simultaneously over a period of 3 hrs. After cooling to room temp. and filtering through a stainless steel screen having 0.25-mm. openings, a smooth, creamy, stable emulsion contg. 54.02% solids was obtained. The I-II copolymer contained 10.6% II by wt. of the I in the copolymer. It had superior strength when used as an adhesive to bond 2 blocks of hardwood.

L9 ANSWER 201 OF 209 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1967:517526 CAPLUS
DOCUMENT NUMBER: 67:117526
TITLE: Dienic monomer polymerization using alcohol-peroxide catalysts system
INVENTOR(S): Burke, Oliver W., Jr.; Stahly, Eldon E.
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3333015		19670725	US	19631119

AB Unsatd. liquid polymers of C4-8 conjugated diene monomers for use in the formation of protective coatings, inks, and adhesives are prepd. in the presence of an org. peroxy free radical generating catalyst in homogeneous **mixt**. with a C1-6 alc. Thus, butadiene 70.5, methacrylic acid 4.5, iso-PrOH 35.0, and 75% cumene hydroperoxide 4.0 parts was heated to 130.degree. while being stirred at 600 rpm. and maintained for 1.5 hrs., 25 parts styrene added, the polymn. continued for 1.5 hrs. at 130.degree., and the **mixt**. devolatilized at 140.degree./<5 mm. to give a 57% yield of **water**-white polymer having Brookfield viscosity 4230 poises at 30.degree. and <0.2% volatiles. Other catalysts used were tert-butyl hydroperoxide, di-tert-butyl peroxide, p-menthane hydroperoxide, and partially peroxidized tung oil. tert-BuOH and MeOH could be used in place of iso-PrOH.

L9 ANSWER 202 OF 209 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1967:516810 CAPLUS
DOCUMENT NUMBER: 67:116810
TITLE: Color-stabilized epoxides
INVENTOR(S): Goldsmith, William F.; Marples, David F.
PATENT ASSIGNEE(S): Union Carbide Corp.
SOURCE: Brit., 8 pp.
CODEN: BRXXAA
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1074003		19670628	GB	19640624

AB Color-stabilized epoxides contain an inhibiting amt. of a peroxide **compn.**, which is added at 70-100.degree.C., and are used to prep. color-stabilized resins. Thus, 5 wt. % 30% **aq.** H2O2 was added to 1000 g. 3,4-epoxy-6-methylcyclohexylmethyl 3,4-epoxy-6-methylcyclohexanecarboxylate, the **mixt.** heated at 95-7.degree.C. for 3 hrs., and the **water** evapd. to 70-80.degree.C./1 mm. for 2 hrs. to give an epoxy compd. having Gardner color 5.5 after 1 hr. at 350.degree.F. compared to 11.5 for an unstabilized epoxide. Varying the amt. of 30% **aq.** H2O2 affected the color stability after 16 hrs. at 98 .+-. 2.degree. as follows (wt. % 30% **aq.** H2O2 and Gardner color given): 0, 5.7; 0.1, 1.2; 0.3, 1.2; 1.0, 1.2; 3.0, 3.0; 10.0, 7.0. Org. peroxides were similarly used as stabilizers.

L9 ANSWER 203 OF 209 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1967:491513 CAPLUS
DOCUMENT NUMBER: 67:91513
TITLE: Synthetic rubbers
INVENTOR(S): Richter, Johannes; Herte, Paul; Bochmann, Dieter; Neupert, Hans
SOURCE: Ger. (East), 4 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 55827		19670505	DD	19660826

AB Synthetic rubbers with better overall properties are prepd. from 1,3-dienes such as butadiene (I) and its **mixt.** with styrene (II), acrylonitrile, or other vinyl homologs in the presence of special alkylaryl hydroperoxide catalysts. Thus, a typical **compn.** consists of I 70, II 30, resin acid 2.25, fatty acid 2.10, Wotamol 0.10, KOH 1.18, p-diisopropylbenzene monohydroperoxide (III) 0.18, triethylenetetramine 0.02, Na3PO4 0.10, and **water** 150 parts. Comparison of the above **compn.** with controls not using III showed that the test **compn.** had much better vulcanization values and lower Huggins const. Other hydroperoxide catalysts used were isopropylbenzene hydroperoxide and chlorotriisopropylbenzene monohydroperoxide.

L9 ANSWER 204 OF 209 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1967:436225 CAPLUS
DOCUMENT NUMBER: 67:36225
TITLE: Polarographic analysis of waste **waters** from phenol and acetone production
AUTHOR(S): Shleina, T. T.; Buzlanova, M. M.
SOURCE: Zavod. Lab. (1967), 33(3), 290-3
CODEN: ZVDLAU
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The **mixt.** of acetophenone and mesityl oxide was reduced polarographically in 0.5N KOH medium at potentials E1/2 = -1.44 v. and E1/2 = -1.54 v. vs. Hg pool. The differential polarography and the addn. method for quant. evaluation were used. The other components of waste **waters** did not interfere. The relative error was .+-.4%. The **mixt.** of cumene hydroperoxide, H2O2, and acetophenone was reduced in 0.05N LiCl medium at potentials E1/2 = -0.3 v., E1/2 = -1.25 v., and E1/2 = -1.75 v. For quant. evaluation the calibration curves of single standard components were used, with relative error .+-.2-4%. The sensitivity was 0.01-0.09 mg./ml. The detn. of .alpha.-methylstyrene (I) was made by the Alekseeva, et al., method (Alekseeva, et al., CA 59: 5341a) after conversion of I to the pseudo-nitroso compd. which was

reduced at potential E1/2 = 0.2 v. compared with the S.C.E. The presence of PhOH >0.05 mg./ml. interfered. The relative error was .+-.3%, the sensitivity 0.03 mg.I/ml.

L9 ANSWER 205 OF 209 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1967:422479 CAPLUS
DOCUMENT NUMBER: 67:22479
TITLE: Unsaturated polyester curing system consisting of cumene hydroperoxide, methyl ethyl ketone peroxide, and thioglycolic acid
INVENTOR(S): Montesano, Lewis
PATENT ASSIGNEE(S): Bell Telephone Laboratories, Inc.
SOURCE: U.S., 2 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3318974		19670509	US	19650323

AB Styrene-polyester (I) is cured with a critical **mixt**. of free-radical initiators. Thus, 100 parts I, viscosity 600-750 cp., sp. gr. 1.11-1.13, a 7:3 **mixt**. of a polyester from phthalic anhydride, maleic anhydride, and propylene glycol with styrene, was thoroughly mixed with cumene hydroperoxide 0.25, Me Et ketone peroxide 0.5, and thioglycolic acid (II) 0.5 part. After 5 min. at room temp. the **mixt**. had gelled to form a **water**-white hard resin without cracks. The same results were obtained with 0.25 parts II.

L9 ANSWER 206 OF 209 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1967:116617 CAPLUS
DOCUMENT NUMBER: 66:116617
TITLE: Polyacrylonitrile solutions for spinning
PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.
SOURCE: Neth. Appl., 12 pp.
CODEN: NAXXAN
DOCUMENT TYPE: Patent
LANGUAGE: Dutch
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6608595		19661227		
PRIORITY APPLN. INFO.:			DE	19650623

AB Acrylonitrile, alone or with another ethylenic unsatd. monomer, in HCONMe2 is polymd. at 30-60.degree. in the presence of an org. peroxide and an .alpha.-hydroxy-.alpha.-aminosulfone having the formula [RSO2C(R1)R2]nX, in which R is an aliphatic or aromatic hydrocarbon radical, R1 and R2 are H atoms or alkyl radicals, n is 1 or 2, and X is OH or NR3, R3 being an alkyl, hydroxyalkyl or an aryl radical, optionally with addn. of a strong mineral acid. Thus, in a closed 100-ml. app. completely filled, the reaction **mixt**. consisted of 65 g. HCONMe2, 32.7 g. acrylonitrile, and 2.3 g. Me acrylate. The polymerization took place in the presence of 0.3 g. cumene hydroperoxide and 0.3 g. (ClC6H4SO2CH2)2NMe. The filled app. was kept at 45.degree. for 10 hrs. in a **water** bath. The relative viscosity of 0.5% polymer soln. at 20.degree. in HCONMe2 was 1.85, yield was 59%, and the soln. was pale yellow. With 0.2 g. concd. H2SO4 in addn. to the above ingredients, the yield was 51%, relative viscosity 1.94, and the soln. was colorless.

L9 ANSWER 207 OF 209 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1967:37567 CAPLUS
DOCUMENT NUMBER: 66:37567
TITLE: Oxidation of sulfoxides with hydroperoxides
AUTHOR(S): Kuhnen, Ludwig
CORPORATE SOURCE: Chem. Werke Huels A.-G., Marl, Ger.
SOURCE: Angew. Chem. (1966), 78(20), 937
CODEN: ANCEAD
DOCUMENT TYPE: Journal
LANGUAGE: German

AB Sulfides and sulfoxides were oxidized to sulfones by equimolar amts. of org. hydroperoxides in the presence of V, Mo, or Ti compds. in almost quant. yields. The sulfides and sulfoxides, dissolved in benzene, EtOAc, or EtOH, were mixed with the catalyst and heated to 50 to 70.degree., and the org. hydroperoxide was then added slowly. The reaction was complete as soon as only traces of peroxide could be detected with KI in the reaction **mixt**. The sulfones were then isolated by crystn. or distn. PhSMe in benzene was oxidized with tert-butyl hydroperoxide in the presence of molybdenyl acetylacetonate to produce PhSO2Me in 98% yield. Me2SO4 was oxidized with cumyl .alpha.-hydroperoxide in the presence of V2O5 to give Me2SO2 in 91% yield. These reactions proceeded without the presence or formation of **water** or carboxylic acids.

L9 ANSWER 208 OF 209 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1967:19053 CAPLUS
DOCUMENT NUMBER: 66:19053
TITLE: Vinyl chloride polymers or copolymers
PATENT ASSIGNEE(S): Societa Edison S.p.A.-Settore Chimico
SOURCE: Neth. Appl., 11 pp.
CODEN: NAXXAN
DOCUMENT TYPE: Patent
LANGUAGE: Dutch
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6601847		19660823		
PRIORITY APPLN. INFO.:			IT	19650222

AB The polymerization or copolymerization of vinyl chloride at low temps. and in the presence of a tetravalent Ce salt and an organometallic compd. of Ge, Sn or Pb as catalyst is terminated at a desired degree of conversion of the monomer by addn. of a peroxide, e.g. H2O2, cumyl hydroperoxide, cyclohexanone peroxide, or tert-Bu hydroperoxide, which are supplied in an amt. of 0.001-5 parts by wt. per 100 parts by wt. of monomer. The pH of the reaction **mixt**. is brought to <4 after addn. of the peroxide. A perfectly white polymer is obtained and discoloration by the presence of traces of the Ce salt is prevented. The polymer has a high crystallinity, a syndiotactic index of 2-2.8, and a mol. wt. of 20,000-200,000, and is suitable for the prepn. of fibers, films, and tubes resistant to boiling **water** and chlorinated solvents. For example, a **mixt**. of 500 g. anhyd. vinyl chloride, 3.2 ml. Et4Pb, and a soln. of 0.9 g. cerium ammonium nitrate in 120 ml. MeOH was polymerized in a N atm. at -40.degree.. After 2 hrs. and 45 min., a soln. of 0.4 ml. 35% H2O2 and 0.3 ml. concd. HNO3 in 30 ml. MeOH was supplied and the polymerization stopped immediately. When H2O2 was added, no after-polymerization took place.

L9 ANSWER 209 OF 209 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1967:18894 CAPLUS
DOCUMENT NUMBER: 66:18894
TITLE: Copolymerization of vinyl chloride and ethylene initiated by trialkylboron-peroxide catalyst systems
AUTHOR(S): Misono, Akira; Uchida, Yasuzo
CORPORATE SOURCE: Univ. Tokyo, Tokyo, Japan

SOURCE: Bull. Chem. Soc. Jpn. (1966), 39(11), 2458-63
CODEN: BCSJA8
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Low-pressure copolymerization of vinyl chloride and ethylene is initiated by trailkylboronperoxide catalyst systems in a 1:1 **water**-MeOH **mixt**. at 0.degree.. In the presence of cocatalysts hydroperoxide, Et3P and Bu3B are active, while Ph3B is not. As cocatalysts, hydroperoxides, such as tert-BuOOH and cumene hydroperoxide, are more active than disubstituted peroxides such as Bz2O2, tert-BuOOB, and tert-Bu2O2, and azobis(isobutyronitrile). The highest catalytic activity is observed when the cocatalyst/catalyst mole ratio is 0.4. The initiating radical is suggested to be the hydroxy radical, and the initiating mechanism is discussed. The yield and the reduced sp. viscosity of the copolymer decrease rapidly with an increase in the ethylene content of the monomer **mixt**. The monomer reactivity ratios are: .gamma.1 (vinyl chloride) = 4.16 and .gamma.2 (ethylene) = 0.05. The copolymerization proceeds via a normal radical mechanism. The resulting copolymer shows characteristic ir absorption at .nu. 750 cm. -1 and N.M.R. at 8.37 .tau..

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(FILE 'HOME' ENTERED AT 14:39:42 ON 06 SEP 2002)

FILE 'CAPLUS' ENTERED AT 14:40:04 ON 06 SEP 2002
L1 3 S FREEZING POINT DEPRESSION (3W) LIQUID

FILE 'BEILSTEIN' ENTERED AT 14:41:56 ON 06 SEP 2002
L2 2 S CUMENE HYDROPEROXIDE/CN

FILE 'CAPLUS' ENTERED AT 14:45:59 ON 06 SEP 2002

FILE 'REGISTRY' ENTERED AT 14:46:08 ON 06 SEP 2002
L3 1 S CUMENE HYDROPEROXIDE/CN

FILE 'CAPLUS' ENTERED AT 14:46:33 ON 06 SEP 2002
L4 819 S L3 AND (WATER OR H2O OR AQUEOUS)
L5 375 S L4 AND (MIXTURE OR COMPOSITION)
L6 256 S L5 AND 1%
L7 0 S L5 AND WEIGHT PERCENT
L8 0 S L5 AND PERCENT WATER
L9 209 S L5 AND % WATER

=> s l9 and cumene/ti
2000 CUMENE/TI
22 CUMENES/TI
2022 CUMENE/TI
((CUMENE OR CUMENES)/TI)
L10 16 L9 AND CUMENE/TI

=> d ibib abs 1-16

L10 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:429321 CAPLUS
DOCUMENT NUMBER: 136:403494
TITLE: Process for separating phenol from a **mixture** comprising at least hydroxyacetone, **cumene**, **water** and phenol
INVENTOR(S): Schwarz, Christoph; Weber, Mark; Tanger, Uwe; Korte, Hermann-Josef; Ullrich, Jochen
PATENT ASSIGNEE(S): Phenolchemie G.m.b.H. & Co. K.-G., Germany
SOURCE: U.S. Pat. Appl. Publ., 9 pp.

CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002066661	A1	20020606	US 2001-970856	20011005
WO 2002046133	A1	20020613	WO 2001-EP14029	20011130

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DE 2000-10060505 A 20001206

AB Phenol is sepd. from a **mixt**. contg. hydroxyacetone, cumene, **H2O** and phenol, by fractionating the **mixt**. in a process with a fractional distn. step and a phase sepn. step to provide a single phenol fraction contg. <300 ppm of hydroxyacetone. In the work-up by distn. of cleavage product **mixts**., the hydroxyacetone can be removed from the cleavage product **mixt**. together with a phenol fraction from which the hydroxyacetone has to be removed. A process can be used for purifying cleavage product **mixts**. obtained in the cleavage of alkylaryl hydroperoxides such as cumene hydroperoxide. The process allows sepn. of phenol and acetone from **mixts**. obtained in the cleavage of cumene hydroperoxide.

L10 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:256835 CAPLUS
DOCUMENT NUMBER: 136:296542
TITLE: Decomposition of **cumene** oxidation product
INVENTOR(S): Hertzog, Richard R.; Sifniades, Stylianos; Fisher, William Bernard
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 8 pp., Cont. of U.S. Ser. No. 601,879.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002040165	A1	20020404	US 2001-865190	20010723

PRIORITY APPLN. INFO.:
US 1989-297333 B1 19890117
US 1992-920811 B1 19920724
US 1994-203845 B1 19940228
US 1994-333929 B1 19941103
US 1996-601879 A1 19960215

AB A process for decompg. a cumene oxidn. product **mixt**. contg. cumene hydroperoxide (CHP) and dimethylphenyl carbinol (DMPC) to produce phenol, acetone and alpha-Me styrene (AMS) with enhanced safety of operation and reduced byproduct formation comprises the steps: (a) mixing the cumene oxidn. product in a stirred or back-mixed reactor with an acid catalyst, with 10-100 % acetone relative to the amt. of acetone produced during the decompn. reaction, and with up to 4% addnl. amts. of **water** relative to the reaction **mixt**., at an av. temp. between about 50-90.degree. for a time sufficient to lower the av. CHP

concn. of the reactor to 0.2-3.0%, and wherein a portion of DMPC is converted to dicumyl peroxide (DCP); then (b) reacting the reaction **mixt**. from step (a) at a temp. between about 120-150.degree. under plug-flow conditions for a time sufficient to decomp. substantially all residual CHP and at least 90% of the DCP formed in step (a).

L10 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:785348 CAPLUS
DOCUMENT NUMBER: 135:305480
TITLE: **Cumene** hydroperoxide production process
INVENTOR(S): Zakoshanskii, V. M.; Gryaznov, A. K.; Vasil'eva, I. I.
PATENT ASSIGNEE(S): Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2146670	C1	20000320	RU 1998-108236	19980429

AB Emulsion-free two-stage air oxidn. of cumene in absence of initiators, catalysts, additives, and alkali agents in at least two reactor system is described. In the first reactor, cumene conversion at temp. up to 111-95.degree. is maintained at the level of at least 16%. Process is carried out in countercurrent reactor using pure alkali-free cumene. Oxidn. products from the first-stage are treated with ammonium hydroxide soln. until pH at least 8 is reached. When two or more second-stage reactors are available, oxidn. products are treated in each subsequent rector of the system. Conversion of cumene in the second oxidn. stage is maintained at up to 25 wt % at temp. at least 100-85 C, oxidn. charge and oxidizing agent being supplied concurrently. In all first- and second-stage reactors, pressure is maintained at least 4 atm and molar ratio of supplied oxygen to maximally consumed oxygen is maintained within a range of 1.12-1.30. Oxidn. products from the last second-stage oxidn. reactor are distd. to give industrial-grade (63-93%) cumene hydroperoxide. Excessive cumene is returned into process to be treated with **aq**. ammonium soln. to pH 9-10. Recycle cumene from hydrogenation stage and fresh cumene are treated with **mixt**. of 5-10% **aq**. NaOH soln. and 5-10-% **aq**. sodium carbonate soln. Combined streams of the above-mentioned cumenes are washed with **water** at cumene-to-**water** ratio 1: (0.15-0.20). Concn. of cumene hydroperoxide in product rises with rate 2.5 to 4.5% per h, while selectivity is not below 94 mol % and cumene conversion 21-22 mol %.

L10 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:45962 CAPLUS
DOCUMENT NUMBER: 134:86026
TITLE: Isopropylation process and zeolite catalysts for the manufacture of **cumene** from benzene and isopropanol or propylene and isopropanol
INVENTOR(S): Cappellazzo, Oscar; Girotti, Gianni; Pollastri, Massimiliano; Lombardini, Sergio; Piccininno, Domenico
PATENT ASSIGNEE(S): Enichem S.p.A., Italy
SOURCE: Eur. Pat. Appl., 29 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

EP 1069100 A1 20010117 EP 2000-202434 20000710
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
IT 99MI1531 A1 20010115 IT 1999-MI1531 19990713
JP 2001055351 A2 20010227 JP 2000-212526 20000713
PRIORITY APPLN. INFO.: IT 1999-MI1531 A 19990713
OTHER SOURCE(S): CASREACT 134:86026
AB Benzene is isopropylated into cumene by its reaction with isopropanol or a **mixt**. of isopropanol and propylene in the presence of a catalyst comprising a zeolite and an inorg. ligand and the isopropylation is conducted under temps. and pressures such that the concn. of **water** in the reaction's liq. phase is .ltoreq.8000 ppm, regardless of the total **water** content in the reaction **mixt**. The cumene may subsequently be oxidized into cumene hydroperoxide, reacted with an acid to form phenol and acetone, and the acetone hydrogenated into isopropanol.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:410363 CAPLUS
DOCUMENT NUMBER: 133:19089
TITLE: Installation and process for decomposition of **cumene** hydroperoxide for phenol manufacture in inert solvents
INVENTOR(S): Anastasiu, Valentin; Vintan, Lucian; Lupascu, Mihai; Botoc, Gheorghe; Paduraru, Dan-Mugurel; Gradinaru, Apostol; Strapuc, Valentin; Constantinescu, Victoria; Murarasu, Liliana
PATENT ASSIGNEE(S): S.C. Carom S.A., Onesti, Rom.
SOURCE: Rom., 7 pp.
CODEN: RUXXA3
DOCUMENT TYPE: Patent
LANGUAGE: Romanian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RO 111185	B1	19960730	RO 1995-1717	19951002

AB The tech. grade cumene hydroperoxide decomps. in one step in acetone as inert solvent, forming an acetone-phenol **mixt**. with mol. ratio of 1.1-1.6:1, acidity of 0.08-0.12%, preferably 0.09-0.1%, at 56-60.degree. and atm. pressure and without addn. of **water**. The app. comprises tubular heat exchanger tubular reactor equipped with baffles to promote heat transfer and control of the reaction temp., inlet and outlet valves, recirculation pumps, pump control sensors for reactants, and pumping system for sulfuric acid. The installation of the invention was used in decompn. of cumene hydroperoxide and of dicumyl peroxide, using H2SO4, producing phenol-acetone **mixt**.

L10 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:249743 CAPLUS
DOCUMENT NUMBER: 114:249743
TITLE: Purification of acetone for regeneration of sorption beds for treatment of wastewater from production of phenol from **cumene** hydroperoxide
INVENTOR(S): Bogdaniak-Sulinska, Wanda; Zieborak, Kazimierz; Galbfach, Ryszard; Zebrowski, Michal; Rosciszewski, Andrzej; Dudek, Joanna; Mlynarczyk, Anna; Franek, Lucjan
PATENT ASSIGNEE(S): Instytut Chemii Przemyslowej, Pol.
SOURCE: Pol., 5 pp. Abstracted and indexed from the unexamined application.
CODEN: POXXA7

DOCUMENT TYPE: Patent
LANGUAGE: Polish
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 152006	B1	19901031	PL 1987-266435	19870625

AB Shaking impure Me2CO obtained along with phenol in the acid decompn. of cumene hydroperoxide with 5-15% addnl. **water** and withdrawing the upper hydrocarbon layer gave Me2CO contg. <30% **water**, useful for the title process. Thus, a **mixt**. contg. Me2CO 69.23, phenol 0.33, mesityl oxide (I) 0.006, cumene 0.22, .alpha.-metylstyrene (II) 4.55, acetophenone (III) 0.01, and **water** 19.65% was shaken 30 s with 5% addnl. **water**, and after 15 min aging, a lower layer contg. Me2CO 74.18, phenol 0.01, I 0.003, cumene 0.8, II 0.5, III 0.007, and **water** 24.5% formed.

L10 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:514518 CAPLUS
DOCUMENT NUMBER: 113:114518
TITLE: Kinetic characteristics of decomposition of **cumene** hydroperoxide in solutions of perchloric acid in **water**-alcohol solvents
AUTHOR(S): Vinnik, M. I.; Kislina, I. S.; Bushmakin, L. G.
CORPORATE SOURCE: Inst. Khim. Fiz. im. Semenova, Moscow, USSR
SOURCE: Kinet. Katal. (1990), 31(3), 528-34
CODEN: KNKTA4; ISSN: 0453-8811
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB PhCMe2OOH (I) hydrolysis to PhCMe2OH and H2O2 and its decompn. to PhOH and Me4CO were studied in HClO4-contg. ROH-**H2O** (R = Et, Pr, Me3C) **mixts**. The yield of PhOH and Me2CO decreased with increasing HClO4 concn. PhOH and Me2CO were formed by 2 paths, 1 involving a I complex with H3O+ ClO4-.**H2O** and the other a I-H5O2+ complex.

L10 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:157487 CAPLUS
DOCUMENT NUMBER: 112:157487
TITLE: Kinetics of **cumene** hydroperoxide decomposition in **aqueous** solutions with catalysis by perchloric acid and hydrochloric acid-alkali metal chloride **mixtures**
AUTHOR(S): Kislina, I. S.; Bushmakin, L. G.; Sysoeva, S. G.; Antonovskii, V. L.; Zakoshanskii, V. M.; Vinnik, M. I.
CORPORATE SOURCE: Inst. Khim. Fiz., Moscow, USSR
SOURCE: Kinet. Katal. (1989), 30(1), 229-32
CODEN: KNKTA4; ISSN: 0453-8811
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Two mechanisms for the title process were found. In the first, the rate const. is proportional to the deriv. of the thermodn. activities of acid and **water** and is identical for K+, Na+, and Li+ solns. In the second, the rate const. is proportional to the concn. of H5O2+.

L10 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:120376 CAPLUS
DOCUMENT NUMBER: 106:120376
TITLE: Method of .alpha.-methylstyrene isolation from byproducts arising during phenol production by the **cumene** process
INVENTOR(S): Koval, Jan; Mikula, Oldrich; Revus, Milos; Komorova, Hana; Brezula, Ludovit; Stefanik, Ivan; Tatransky, Ivan; Krizka, Pavel; Danilla, Frantisek; Suva, Jan

PATENT ASSIGNEE(S): Czech.
SOURCE: Czech., 5 pp.
CODEN: CZXXA9
DOCUMENT TYPE: Patent
LANGUAGE: Slovak
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 234827	B1	19850416	CS 1983-4241	19830613

AB Increasing the **water** content of a **mixt**. of the title byproducts (aliph. and arom. ketones, alcs., and heterocyclics) from the usual 1.5 to 14% enables sepn. of an azeotropic **mixt**. of Me2CO, PhCMe:CH2 (I), cumene, **water**, and minor amts. of PhOH and PhCOMe at the column head, and crude PhOH discharge at the base. The head product is distd. in a second column with added NaOH, Me2CO is sepd. at the head, and PhONa is removed from the **aq**. phase. The org. phase is fractionated in a third column at 6-19 kPa and reflux ratio 10 to give pure cumene which is recycled into the oxidn. process, and a mixed cumene-I fraction which is hydrogenated. The reflux ratio is then changed to 6 to yield pure (>98%) I and distn. bottoms contg. dimers of I and PhCOMe which are collected and worked up sep.

L10 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1975:7928 CAPLUS
DOCUMENT NUMBER: 82:7928
TITLE: Catalytic activity of some silica-alumina-**water** (n SiO2.m Al2O3.xH2O) systems on the decomposition reaction of **cumene** hydroperoxide. IV. Infrared study of synthetic systems of aluminosilicates
AUTHOR(S): Cormos, Liviu; Popica, Stana
CORPORATE SOURCE: Rom.
SOURCE: Stud. Univ. Babes-Bolyai, Ser. Chem. (1974), 19(1), 19-24
CODEN: SUBCAB
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The ir spectrum of aluminosilicates was studied, in relation to their use as catalysts in decompn. of cumene hydroperoxide. Shifts of the ir bands in relation to **compn**. are given and correlated with the max. catalytic activity of aluminosilicates contg. 30% Al2O3. Mech. **mixts**. of Al2O3 and SiO2, which are noncatalytic were also studied.

L10 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1973:58042 CAPLUS
DOCUMENT NUMBER: 78:58042
TITLE: Removing sulfuric acid from **mixtures** arising from the acid fission of **cumene** hydroperoxide
INVENTOR(S): Boehme, Guenter; Kiessling, Wolfgang; Moll, Karl Klaus; Raue, Bernd
SOURCE: Ger. (East), 4 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 91643		19720805	DD 1971-153765	19710315

AB The title process involves extn. with a small amt. of **water** and eliminates the need for neutralization of the **mixt.** and subsequent deposition of salts in distn. columns. Thus, a cumene hydroperoxide decompn. **mixt.** contg. cumene 0.80, PhCOMe 0.95, Me2PhCOH 0.05, **H2O** 0.60, Me2CO 34.90, .alpha.-methylstyrene (I) 1.10, PhOH 57.45, higher phenols 2.10, I dimer 0.60, phenol tar 1.20, mesityl oxide 0.15, and H2SO4 0.10 wt. % was treated countercurrently at 4 l./hr in an extn. column filled with Raschig rings with 1 l./hr **H2O** at 40.degree. (theor. step no. 0.24) to give a **mixt.** contg. <10 mg/l. H2SO4. Eight further examples illustrated changes in extn. conditions.

L10 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1970:445113 CAPLUS
DOCUMENT NUMBER: 73:45113
TITLE: Removal of salts from phenol and acetone obtained by decomposition of **cumene** hydroperoxide
INVENTOR(S): Janda, Jan; Koval, Jan; Kukel, Jan
SOURCE: Czech., 3 pp.
CODEN: CZXXA9
DOCUMENT TYPE: Patent
LANGUAGE: Czech
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 131559		19690315	CS	19670209

AB Requisite conditions are described which reduce the content of inorg. salts in the org. phase <0.01% and prevent clogging of the boiler and column. Thus, a **mixt.**, after acid hydrolysis of cumene hydroperoxide, contg. 3 kg AcH, 2656 kg Me2CO, 55 kg mesityl oxide, 56.2 kg cumene, 215.3 kg PhCMe:CH2, 3935.6 kg PhOH, 41.5 kg PhCOMe, 115.2 kg cumenylphenol, 14.7 kg Me2CPhOH, 357.8 kg pitch, 5.6 kg H2SO4, and 50.5 kg **H2O**, was homogenized at 55.degree. with a soln. prepd. from PhONa and phenol **water**, contg. 203.5 kg PhONa, 402.7 kg PhOH, 14.9 kg Me2CO, 3.7 kg PhCOMe, 5.6 kg p-cumylphenol, and 1545.5 kg **H2O**. The **mixt.** was treated at 55.degree. with 85.3 kg 94% H2SO4 to give 2 layers in 30 min. The upper org. layer contained all org. substances, 12% **H2O**, and 0.008% Na2SO4, while the lower **aq.** layer contained 25% Na2SO4, 0.3% PhOH, and 0.6% Me2CO. The content of Na3SO4 in the org. phase dropped to 8% and the Na salts of org. acids passed into the **aq.** layer.

L10 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1970:78664 CAPLUS
DOCUMENT NUMBER: 72:78664
TITLE: Continuous catalytic cleavage of **cumene** hydroperoxide with sulfuric acid
INVENTOR(S): Mantegazz, Attilio; Reni, Cesare
PATENT ASSIGNEE(S): Societa Italiana Resine S.p.A.
SOURCE: Ger., 5 pp.
CODEN: GWXXAW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1443329		19700102		
PRIORITY APPLN. INFO.:			IT	19620110

AB Cumene hydroperoxide (I) is converted to phenol (II) and acetone (III) by homogeneous catalytic cleavage with H2SO4 in a heat-exchanger to remove

the reaction heat. Thus, 500 parts of a previous cleavage **mixt**. is recycled with a pumpto a velocity of 2 .times. 105 parts/hr. The heat-exchanger is fed with **H2O** at 90.degree. until the recycled **mixt**.reaches 70.degree., then it is cooled with **water** at 25.degree.. I (81.9% in cumene) 1000 parts/hr and 98% H2SO4 2 parts/hr is added continuously to the recycled flow (ratio 1:217), while 1002 parts/hr reaction **mixt**. is removed continuously from the system. The concn. of I never exceeds 0.1% during the reaction, the temp. is kept at 70-2.degree. at normal pressures. The product **mixt**. is neutralized by ion-exchangers and the products are sepd. by distn. yielding 98% II and 96% III.

L10 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1968:410222 CAPLUS
DOCUMENT NUMBER: 69:10222
TITLE: Separation of **cumene** hydroperoxide decomposition products
INVENTOR(S): Nixon, Joseph R., Jr.
PATENT ASSIGNEE(S): Hercules Inc.
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3365375	A	19680123	US 1965-448414	19650415

AB The products obtained by catalytic decompn. of cumene hydroperoxide are sepd. by distn. in a distn. tower divided into 2 zones of approx. equal size by a horizontal baffle plate. Substantially pure acetone contg. .ltoreq. 1% **water** is withdrawn from the head of the column, hydrocarbons and **water**, both free of acetone and phenol, are withdrawn from an intermediate point of the column, and phenol contg. small amts. of **water**, heavy ends, and hydrocarbons is withdrawn from the base of the column. The acetone and hydrocarbon fractions are suitable for use in subsequent operations without further purification. The distn. process is economical because only a single distn. tower is required. Thus, 100 parts/hr. of catalyst-free cumene hydroperoxide decompn. product comprising acetone 45.3, **water** 11.6, hydrocarbons 4.8, phenol 35.6, and heavy ends 2.7% is introduced at the midpoint of a distn. column contg. 55 plates and sepd. in the center by a baffle plate. Live steam is also introduced at 8.6 parts/hr. at the column midpoint, and high pressure steam is introduced at 67 parts/hr. to the base of the distn. column. The amt. of steam used was equiv. to 1944 Btu./lb. of acetone introduced and sepd. A ratio of 4 parts of reflux/part of distillate removed at the column head is employed. Acetone, contg. <1% **water**, is removed at 44.3 parts/hr. from the column head. A **mixt**. of hydrocarbons and **water** is recovered from the midpoint of the distn. column. The **mixt**. is sepd. by decantation, and 4.6 parts/hr. hydrocarbons and 16.9 parts/hr. **water** are recovered, while 46 parts/hr. hydrocarbons and 19.5 parts/hr. **water** are returned as reflux. A **mixt**. of phenol 86.2. **water** 6.8, hydrocarbons 0.5, and heavy ends 6.5% is recovered from the bottom of the distn. column at the rate of 41.3 parts/hr. The acetone product contained no traces of phenol and could be recycled for use in the catalytic decompn. of cumene hydroperoxide.

L10 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1968:108273 CAPLUS
DOCUMENT NUMBER: 68:108273
TITLE: Catalytic activity of nSiO2.mAl2O3.xH2O systems in the decomposition reaction of **cumene**

hydroperoxide. I
AUTHOR(S): Pop, Augustin; Krobl, Paul; Cormos, Liviu; Lengyel, Gheorghina
CORPORATE SOURCE: Univ. " Babes-Bolyai", Cluj, Rom
SOURCE: Stud. Univ. Babes-Bolyai, [Ser.] Chem. (1967), 12(2), 89-95
CODEN: SUBCAB
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The systems nSiO2.mAl2O3.xH2O (where n = 0-20, m = 0-5, and x = 0-3 at 420 and 580.degree. activation temp.) were prepd. by copptg. the mixed gels in proportions desired, from a soln. contg. free silicic acid and Al(NO3)3, at room temp., adding gradually (NH4)2CO3 soln.; a voluminous gel formed at pH .apprx.5. The filtered ppt. is left to dry in free air for several days, is dried at 105.degree., is ground and classified, and is heat-treated. The **compn**. obtained ranged from 100% SiO2 to 100% Al2O3. D.T.A. and differential thermogravimetric anal. curves (10.degree./min., in air) showed that absorbed **H2O** is removed at <350.degree., with max. rate at 130.degree., most of the **water** of crystn. is removed at <700.degree., with the max. rate at 460-70.degree., and the remainder is removed at <1000.degree. at a const. rate. No addnl. modifications were indicated at <550.degree., but at <550.degree. the establishment of chem. bonds between the 2 oxides were indicated, concomitant with elimination of the last amts. of **H2O** . The optimal activation temps. were 420.degree. (where the **water** of crystn. removal was min.) and 580.degree. (where the **water** of crystn. removal became const.). The sp. surface decreased with increase of the Al2O3 proportion from 423 m.2/g. at 0% Al2O3, to 291 m.2/g. at 84.9% Al2O3. The catalytic properties of the systems were studied by using cumene hydroperoxide (I) decompn. as a reaction model. The expts. were effected in a static-type glass reactor, with internal and external cooling (most perfect cooling is essential to remove the reaction heat under isothermal conditions). In each expt. 21 g. of a 10% I soln. was treated with 2.2 g. catalyst, at 20, 30, and 40.degree., agitating strongly. The unconverted I was detd. iodometrically. For the 2 systems with m = 4, n = 1 and with m = 2.5, n = 1, the sp. reaction rate consts. were: at 20.degree. 0.093, 0.04; 30.degree. 0.21, 0.08; 40.degree.-0.37, 0.16; the resp. activation energy values were 12.5 and 12.4 kcal./mole. Examn. of the variation of the conversion as function of the system **compn**. and of the temp. of activation and of reaction, showed that max. conversion was obtained for the system with m = 3, n = 1; the conversion increased with both temps., obtaining 94% at 40.degree..

L10 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1967:422479 CAPLUS
DOCUMENT NUMBER: 67:22479
TITLE: Unsaturated polyester curing system consisting of **cumene** hydroperoxide, methyl ethyl ketone peroxide, and thioglycolic acid
INVENTOR(S): Montesano, Lewis
PATENT ASSIGNEE(S): Bell Telephone Laboratories, Inc.
SOURCE: U.S., 2 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3318974		19670509	US	19650323

AB Styrene-polyester (I) is cured with a critical **mixt**. of free-radical initiators. Thus, 100 parts I, viscosity 600-750 cp., sp. gr. 1.11-1.13, a 7:3 **mixt**. of a polyester from phthalic

anhydride, maleic anhydride, and propylene glycol with styrene, was thoroughly mixed with cumene hydroperoxide 0.25, Me Et ketone peroxide 0.5, and thioglycolic acid (II) 0.5 part. After 5 min. at room temp. the **mixt**. had gelled to form a **water**-white hard resin without cracks. The same results were obtained with 0.25 parts II.

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